COMBAT ORDERS:

AN ANALYSIS OF THE TACTICAL ORDERS PROCESS

A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE

by

John F. Antal, MAJ, USA
B.S. United States Military Academy, 1977

Fort Leavenworth, Kansas
1990

REPORT DOCUMENTATION PAGE

Form Approved
OMB No 0704-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	1 June 1990	Masters Thesis, Aug 1989 to Jun 1990

4. TITLE AND SUBTITLE
Combat Orders: An Analysis of the Tactical Orders Process

5. FUNDING NUMBERS

6. AUTHOR(S)
Major John F. Antal

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE
A

13. ABSTRACT *(Maximum 200 words)*

This study recommends changes to the U.S. Army's tactical orders process in order to increase the Army's ability to execute AirLand Battle at the tactical level of war. The thesis examines the tactical orders process of the Wehrmacht, the Soviet Army and the U.S. Army. The tactical orders process is defined as the process by which a tactical level commander receives or deduces the mission, analyzes the tactical situation, prepares courses of action, makes a decision, issues an order, executes the plan, and adjusts to new situations in order to accomplish the mission. The methodology compared the current U.S. procedures with those of the Wehrmacht and the Soviet Army. The Wehrmacht employed a very decentralized, predominantly verbal, tactical orders process. The Soviet Army employs a very centralized, predominantly graphic, tactical orders process. Both aim at shortening tactical decision cycles and gaining a time advantage through a quick and effective orders process. Research revealed that many units in the U.S. Army do not conduct an effective tactical orders process. Current procedures are "orders intensive" and do not meet the requirements of agility and flexibility demanded by AirLand Battle doctrine. Changes to the orders process, the operations order format and a time linked criteria for orders are suggested.

14. SUBJECT TERMS	15. NUMBER OF PAGES
Combat orders, operation orders, staff planning, synchronization, commander's intent, co-mand and control, troop leading procedures, warning orders, Auftragstaktik, maneuver warfare, attrition warfare, Soviet Troop Control, decision making.	227
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	UL

COMBAT ORDERS:

AN ANALYSIS OF THE TACTICAL ORDERS PROCESS

A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE

by

John F. Antal, MAJ, USA
B.S. United States Military Academy, 1977

Fort Leavenworth, Kansas
1990

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: Major John F. Antal

Title of Thesis: Combat Orders: An Analysis of the Tactical Orders Process

Approved by:

_____, Thesis Committee Chairman
LTC William Bentley, Ph.D.

_____, Member, Graduate Faculty
LTC Arthur H. Tichenor, M.A.

_____, Member, Graduate Faculty
MAJ James F. Gebhardt, M.A.

Accepted this 1st day of June 1990 by:

_____, Director, Graduate Degree Programs
Philip J. Brookes, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.

ABSTRACT

COMBAT ORDERS: AN ANALYSIS OF THE TACTICAL ORDERS PROCESS, by Major John F. Antal, U.S. Army, 227 pages.

This study examines the procedures of the tactical orders process of the Wehrmacht (German Army 1930-1945), the Soviet Army (1939-1990), and the U.S. Army (1940-1990). The research focuses on the tactical orders process at division level and below.

The tactical orders process is defined as the process by which a tactical level commander receives or deduces the mission, analyzes the tactical situation, prepares courses of action, makes a decision, issues an order, executes the plan and adjusts to new situations as required in order to accomplish the mission.

The methodology compares the current U.S. procedures with those of the Wehrmacht (German Army 1930-1945), and the Soviet Army (1939-1990). The Wehrmacht employed a very decentralized, predominantly verbal, tactical orders process. The Soviets employ a very centralized, predominantly graphic, tactical orders process. Both aim at shortening tactical decision cycles and gaining a time advantage through a quick and effective orders process. Research revealed that the tactical orders process employed by the Wehrmacht in World War II was highly sophisticated and an effective combat multiplier. The Soviet "Troop Control" process, likewise, is effective for the Soviet style of warfighting, and is an important part of their vision of success.

The tactical orders process currently being practiced by units of the United States Army is generally ineffective. Current procedures are "orders intensive" and do not meet the demands of modern war as outlined in FM 100-5, Operations. This study recommends changes to the U.S. process to optimize the ability of U.S. Army to execute AirLand Battle on today's battlefields.

ACKNOWLEDGEMENTS

I give special thanks to my thesis committee, Dr. Philip J. Brookes (Ph.D), Lieutenant Colonel William Bentley (Canadian Army, Ph.D), and Major James Gebhardt (MA), who provided me the sound advice of historian, tactician, and Soviet expert respectively. More importantly I appreciate their encouragement and support.

Most importantly, I owe thanks to my wife, Angel, for assisting me in numerous ways to complete this study. Her kind motivation and understanding made this work possible.

TABLE OF CONTENTS

Chapter 1

Introduction

The art of properly framing orders so as to insure effective action by subordinates is an important feature in the exercise of command. Effective orders are the result of clear thinking, definite decisions, and clear, straightforward language designed to translate the decision into action. (From the Staff officers Field Manual, U.S. Army, September 26, 1932) [1]

Command and control of combat units is achieved by issuing orders. An order, written or oral, communicates instructions from superior to subordinate. The command and control of forces on the battlefield by means of combat orders is as old as warfare itself. Combat orders range from a simple "Follow me," shouted by the lowest fire team leader, to the sophisticated approach required to plan and execute the operations of a modern combat division. Without orders, an army has no direction. Without direction, an army does not fight.

Throughout the history of war, the difficulty of leading large forces in battle has been solved by the issue of orders and the use of trusted subordinate commanders to see the battlefield beyond the visual limits of the overall commander. Faced with great

uncertainty and high risk, the commander's role is to orchestrate future events to his own advantage. The commander that can plan quickly and accurately, the commander that can see the essential center of the tactical problem and guide his forces in unison to achieve his objective, usually wins.

Military planning, consequently, is an attempt to arrange the future to develop advantages over the enemy. These advantages, however, can rarely be maintained indefinitely. Their value is relative to the enemy's situation and determined by the commander's ability to benefit from them **in time**. Time is a common denominator of military operations. Tactics really involves the commander's ability to make decisive decisions **in time.** The purpose of the orders process, the commander's staff, and C^3I (Command, Control, Communications and Intelligence) hardware is to support the commander's ability to make decisions **in time** for those decisions to be decisive.

War is a race to gain a time advantage over the enemy. The commander must seize every time-saving expedient and use this "saved" time to his advantage. Time is gained by thinking and acting faster than your opponent. Time is gained by making clear, reasonably correct decisions quickly. Correct decisions require accurate information concerning enemy and friendly capabilities. Accurate information can allow a commander to move with a higher degree of certainty and can permit him to out-maneuver his

opponent in time and space.

Accurate information, however, is the product of certainty over time. Useful combat information is worthless if it is not discovered in time to act upon the information. The commander then faces a dilemma; the fight between the desire for certainty and the need to act quickly. General George Patton pointed out this dilemma when he said: "There is a right time to make every decision. Trying to select the right time is the most important factor for every decision. It is a mistake to make the decision too early, and it is a mistake to make the decision too late..."[2] The goal of a tactical orders process, therefore, is to assist the commander in making correct decisions ***in time***. Time gained in making the decision, is time gained for combat.

War is the realm of confusion and chaos. Orders are often misinterpreted or transmitted incorrectly. The absence of Marshal Grouchy at the Battle of Waterloo, the misinterpretation of orders by the Light Brigade at the Battle of Balaklava, and J.E.B. Sturart's long ride that kept him out of touch with General Robert E. Lee at the Battle of Gettysburg, are legendary examples of the pitfalls of human communication processing in war. It is difficult to process information with great accuracy when the receivers are wet, cold, hungry, tired, and scared. Few armies have developed an effective process to assist their commanders in transmitting combat orders clearly and quickly.

The United States Army is no exception. "In general, experience at the National Training Center (NTC) indicates that leaders fall down on two of their task as leaders - communicating plans to subordinates and supervising the plans execution."[3] These two items, communicating a plan and supervising the plan's execution, are the essence of command. If orders are not understood and the supervision of plans does not occur, the result is often defeat.

The effectiveness of the current orders process practiced by units of the U.S. Army is an item of close scrutiny for the units rotating to the realistic and demanding force-on-force training at the NTC. A review of results and lessons learned from the NTC suggests that the tactical orders process currently practiced by units of the United States Army does not develop the full combat potential of the Army. Current procedures are "orders intensive" and do not meet the demands of AirLand Battle as outlined in FM 00-5, Operations. The Army's attempt to solve this problem with "high-tech" C^3I hardware has not been effective.

The United States Army does not employ effective procedures for time-critical tactical planning. The specific products of operations orders have not been established, particularly in regards to available planning time. The process for planning hasty and deliberate attacks, for instance, varies only in depth, not in product. Tactical planners often attempt too much in too little

time because the process does not differentiate planning products by available planning time. "The differences lie in the amount of planning, coordination, and preparation prior to execution -- in other words, how **thoroughly** the principles can be applied, not whether they apply."[4]

The side that can decide and issue orders faster than its opponent, **and translate the order into decisive action,** can gain a valuable time advantage. To gain this time advantage, the tactical planner must create and transmit the minimum essential elements of the order within the limitations of the available planning time. This must be accomplished in enough time for subordinate commanders and sub unit leaders to conduct their own planning, preparation, reconnaissance and rehearsal.

Methodology

The process of preparing, issuing and supervising combat orders forms a cycle that is universal to all military operations. I have named this cycle the "Tactical Orders Process." The elements of the process were derived from current U.S. Military literature and represent an AirLand Battle approach to tactical decision making.

This study examines the effectiveness of the tactical orders process of the German Army, the Soviet Army and the United States Army. The research focuses on the tactical orders process

at division level and below. The tactical orders process of each army is measured against the planning tenets of the 1986 version of U.S. Army Field Manual 100-5, Operations. This study compares the orders processes of the Wehrmacht, Soviet, and American armies and highlights effective techniques and procedures for executing tactical planning to support the conduct of AirLand Battle.

The Wehrmacht, renown for its application of maneuver warfare, is studied first. The Soviet method of "Troop Control" is analyzed next to study the application of "a scientific approach" in the execution of the Tactical Orders Process. Finally, the orders process of the United States Army is analyzed to determine if current techniques support the successful execution of the AirLand Battle.

The Wehrmacht's and Soviet Army's tactical orders process are analyzed in detail. The development of German and Soviet decision-making doctrine is covered in detail in Annex A (Wehrmacht Tactical Orders Process Development) and Annex B (Soviet Tactical Orders Process Development). The main focus of the historical study is directed at a review of the German and Soviet tactical orders process as portrayed in their separate doctrines.

The performance of units at the NTC, as compared to the requirements of the AirLand Battle doctrine, will provide the

means for analyzing the U.S. Army's tactical orders process effectiveness. To help the reader visualize how each orders process is conducted, a tactical orders process example will be developed for each army. Lastly, a summary will follow at the end of each chapter.

Purpose

The purpose of this study is to analyze current U.S. tactical orders process against the processes used by the Wehrmacht and the Soviet Army. The goal of the study is to determine what changes in the U.S. Army's tactical orders process are needed for the U.S. Army to execute AirLand Battle doctrine.

The Definition of the Tactical Orders Process

The tactical level of war is defined as the "art by which corps and smaller unit commanders translate potential combat power into victorious battles and engagements."[5] Activities at the tactical level focus on the employment of the dynamics of combat power to defeat an enemy in combat at a particular time and place. For the purposes of this study the tactical level of war is considered as the division level and below.

The tactical orders process, therefore, is defined as the process by which a tactical level commander receives or deduces the mission, develops the tactical

situation, prepares courses of action, makes a decision, issues an order, executes his plan and *adjusts to new situations as required* in order to accomplish the mission. It includes the techniques by which orders and instructions are organized, packaged, sequenced, and transmitted from commanders to subordinates. More than a mere decision-making process, the "tactical orders process" involves the method, format, and the transmission of the intent of the order. The tactical orders process is a continuing process with the defeat of the enemy force as its main goal. The tactical orders process does not end with combat, but continues throughout and after the fight.

Summary

The tactical orders process is an important element of combat power. "Whoever can make decisions faster gains a tremendous, often decisive, advantage. Decision making thus becomes a time-competitive process...." [6] The process by which orders are prepared and transmitted, therefore, can become an important combat multiplier. This study recommends that U.S. tactical planners adopt some of the techniques employed by the Wehrmacht in World War II, and some of the techniques of the Soviet Army, to optimize our ability to execute AirLand Battle doctrine and a maneuver style of warfighting. Specifically, the study recommends changes to the 5 paragraph field order to

develop an AirLand Battle field order format, a simplified tactical orders process model as a procedure for decision-making, and the development of time sensitive schemes for operation orders.

The U.S. Army's orders process has evolved over the years into a laborious, paper-intensive drill. Has the U.S. Army adopted techniques that will aid or hinder the ability to wage maneuver warfare under the doctrine of AirLand Battle? What does a maneuver-oriented, AirLand Battle approach to the tactical orders process consist of? The next chapter analyzes the differences in the two opposing styles of warfare, "Attrition" verses "Maneuver" and determines how they relate to the style of issuing orders.

End Notes Chapter 1

[1] War Department, Staff officers Field Manual, (Washington: Government Printing Office, September 26, 1932), p. 27.

[2] Porter B. Williamson, Patton's Principles, (Tucson, Arizona: Management and Systems Consultants, Inc, 1979), p. 116.

[3] Maj Vernon W. Humphrey, "NTC Command and Control," Infantry Magazine, (Fort Benning, Georgia: U.S. Army Infantry School, Sept-Oct 1984), p. 36.

[4] U. S. Department of the Army, FM 100-5 Operations, (Washington, D.C: U.S. Government Printing Office, 5 May, 1986), p. 117.

[5] Ibid., p. 10.

[6] U.S. Department of the Navy, FMFM1, Warfighting, (Washington, D.C: Headquarters United States marine Corps, 6 March 1989), p. 69.

Chapter 2

Styles of Warfare

AirLand Battle doctrine describes the Army's approach to generating and applying combat power at the operational and tactical levels. It is based on securing or retaining the initiative and exercising it aggressively to accomplish the mission. [1]

The style of warfare that an army adopts determines its approach to the planning and execution of combat orders. The choice of style affects the method of command and control. The method of command is often critical to success. "Without a striking a correct balance between centralization and decentralization, discipline and initiative, authority and individual responsibility, it is impossible for any human organization -- let alone a military one, operating as it does in an environments where disorder and confusion are endemic -- to function or, indeed, exist."[2]

There are two distinct styles of warfighting: attrition and maneuver. The attrition style is based on firepower. The maneuver style is based on movement. Attrition attacks strength, maneuver attacks weakness. The elements of attrition and maneuver often exist simultaneously. Obviously attrition, the

killing of the enemy, must occur in "maneuver warfare" just as "maneuver" often occurs in the deadliest war of attrition. Like the oriental concept of yin and yang, "attrition" and "maneuver" are complimentary, yet opposite. But the predominance of one style over the other has important implications on an army's doctrine, organization, and command and control philosophy.

Attrition Style of Warfare

The attrition style of warfare offers victory over time by focussing on the destruction of the enemy's forces. Attrition deals with destruction over time. Attrition warfare reduces the enemy through the application superior firepower. "Attrition warfare emphasizes the material aspects of war. It dehumanizes war to a mathematical equation. An attritionist sees the enemy as targets to be engaged and destroyed systematically." [3]

The American Army has emphasized attrition warfare in most of its wars. Both World Wars were won by the overpowering superiority of American firepower, numbers, and technology. The stalemate in Korea was "guaranteed" by this same superiority. During the Vietnam War, the strategy of attrition reached its nadir as the American doctrine for war. Combined with the zealous belief in the killing power of new technology, American commanders executed a military strategy of overwhelming firepower against the North Vietnamese Army and Viet Cong. "It was a strategy that was based on the attrition of the enemy

through a prolonged defense and made no allowance for decisive offensive action." [4] In spite of the awesome support of the latest, most devastating firepower that America could muster, the strategy failed. America became exhausted and lost the will to carry on a war of attrition for limited objectives. The enemy gained strength, and America lost the war.

To win by attrition one must kill the enemy until one has more force left than his opponent. In essence, one side outlasts the other. The "addict of attrition advances cautiously and tidily on a broad front to seize another piece of ground which directly threatens some vital interest of the erstwhile aggressor. This process is repeated until one side has gained overwhelming strength (Second World War) or becomes exhausted (First World War)." [5] This philosophy is described at its worst by the loss of over 200,000 British soldiers during the sixteen-day battle of the Somme in 1918. In Vietnam it was represented by the indecisive commitment of an army dedicated to the policy of "body-count." The bloody eight-year war between Iran and Iraq is a frightening example of "high tech" attrition warfare in modern times.

The attrition approach to war attempts to translate war into a science and focuses on efficiency. The emphasis is on scientific management in the form of detailed planning, management of resources and active centralized control. Only through detailed planning can the firepower of a large mass be synchronized in time, space and purpose.

The attritionist deploys a huge army in order to overpower the enemy. Overwhelming numbers require less military skill to accomplish tactical and operational objectives. Attrition oriented armies often consist of less trained but more numerous combat units. Skill is replaced by mathematics, maneuver is replaced by firepower. This lower level of training drives the requirement for centralized control and centralized planning.

Control becomes the predominate command principle in attrition warfare. Control is achieved by centralized planning and centralized, active control over each piece of the combat equation. Centralized planning moves the mass in the assigned direction. Centralized, active control insures that massive firepower is used efficiently. Victory will be declared when the enemy is annihilated. The end can be mathematically determined by an ever increasing count of destroyed enemy personnel, vehicles and equipment.

Maneuver Style of Warfare

Maneuver warfare focuses on defeating the enemy by making the enemy incapable of fighting. Maneuver warfare is based on a "desire to circumvent a problem and attack it from a position of advantage rather than straight on." [6] Maneuver warfare minimizes the mere counting of killing systems and emphasizes the intangible, human factors; the intangible factors of leadership, organization, cohesion and morale. The maneuver approach relies

more on speed and surprise as multipliers of combat power. This approach is best described by Sir B. H. Liddell Hart's concept of the "indirect approach." Using the indirect approach the enemy is attacked along the "line of least expectation and least resistance, resulting in the psychological dislocation of the enemy."[7] The results of this "psychological dislocation" often results in the enemy's defeat on a scale out of proportion to the effort employed.

The Wehrmacht's quick and decisive defeat of France in 1940 is the quintessential example of the potential of maneuver warfare. The French and their allies, with a force ratio of roughly 1:1 with the Germans, were attacked on 10 May 1940 and surrendered by 21 June 1940. The battle of France was dramatic and stunning. The Germans attacked French weakness, irrupted the French line through the "impassable" Ardennes Forest and drove deep into the French rear area of operations. The Germans aimed their panzer divisions at the weak, relatively undefended French and British rear areas rather than attack the formidable defenses of the infamous Maginot Line. The Germans concentrated on destroying the enemy's command and control and cutting the combat forces off from their lines of communication. They did not try to systematically destroy the French. Had they done so, the "Blitzkrieg" might have never occurred and the outcome of the battle would have resembled the trench warfare of World War I.

Maneuver warfare is a thinking activity; an art, based on scientific foundations. "Maneuver theory draws its power mainly

from opportunism -- the calculated risk, and the exploitation both of chance circumstances and (to borrow a tennis term) of "forced and unforced errors" by the opposition; still more on winning the battle of wills by surprise or, failing this, by speed and aptness of response." [8]

In the attack, maneuver warfare bases movement on active reconnaissance. Often called "reconnaissance-pull" operations, the maneuver-oriented commander supports success by driving his forces into areas that reconnaissance proves is weakly defended. In the defense, maneuver warfare bases the defense on the enemy, and seeks to defeat (rather than destroy) the enemy by active measures such as counterattack, the destruction of the enemy's command and control, or the disruption of his combat support, or combat service support. Firepower is still vital to maneuver warfare, it is merely applied to a different purpose. In maneuver warfare, firepower is used to suppress the enemy with fire in order to make maneuver possible. [9]

To accomplish this requires an effective, decentralized decision making process that expects subordinate commanders to act within the higher commander's intent, without slowing the decision process down by waiting for instructions. Subordinate commanders must take advantage of fleeting opportunities **as they occur**. Maneuver warfare, therefore, places a high priority on the leader's ability to sense the situation, appraise it correctly and act faster than his opponent. **Command**, rather than control,

becomes the predominant command principle in maneuver warfare. The orders process practiced by armies that attempt to employ maneuver warfare must address these needs.

Detailed Orders Tactics versus Mission Tactics

Two competing control philosophies have emerged from the "Attrition" and "Maneuver" styles of war. These concepts are the "detailed orders tactics" approach (centralized control), and the system of "mission tactics" (decentralized control).

"Detailed orders tactics" is an orders-intensive approach to insure the continuous active control of subordinate units during combat. Active control requires technology and rigid organization. The orders-intensive system constantly updates the commander on the situation in order to assist him in making battlefield decisions. These decisions are based upon a detailed plan that covers the most likely course of action and enemy reaction. Proponents of this theory visualize a technological solution to command and control, with heavy emphasis on the ability to **control** elements throughout the battle. The subordinate's understanding is explicit, leaving nothing implied.

The other system, "mission tactics," involves indirect control and implicit understanding. "Mission tactics" concedes that the tactical battlefield is now too confusing to centrally manage and that the commander must direct his operations through guidance rather than active control. He must trust his

subordinates to execute their missions according to his intent. Rather than trying to follow the letter of the tactical plan, subordinates are trained to follow the goals of the commander and make their own decisions at the point of action. The emphasis is on **command.** The subordinate's understanding is implicit; implied, rather than expressly stated.

Mission tactics are the preferred method of waging maneuver warfare. This is accomplished largely by verbal orders, issued by the senior commander, overlooking the terrain where the battle will be fought. Subordinates are expected to make decisions within the guidelines established by the commander's intent. When decisions are made at the point of execution, advantage can be taken of battle opportunities as they occur, without loss of time. "Time is always critical and mission type orders save time. The command style and staff functioning that contribute most to maneuver warfare is characterized by the application of "mission orders."[10]

Mission tactics demand a high degree of military skill and discipline. "Mission tactics" are just as the name implies: the tactic of assigning a subordinate a mission without specifying how the mission must be accomplished. The manner of accomplishing the mission is left to the subordinate, thereby allowing him freedom -- and establishing the duty -- to take whatever steps he deems necessary based on the situation." [11] Mission tactics are not new to the American Army. The concept is

rediscovered whenever the Army has to learn the hard lessons of combat.

The The CGSC Quarterly,Vol XV , 1935, had the following information concerning mission tactics:

> In the past we have often used what may be called mission tactics and mission orders. Under this system, instructions and orders are not prescribed in minute detail; the reason being that the commander on the ground is the only person who can correctly judge existing conditions and take the proper action when a change occurs in the situation. In addition to the tactical reason there is a strong psychological reason for such tactics and orders. The commander who is given a mission and made responsible for results will normally accomplish more because he can act in accordance with his own individuality. [12]

Command and Control

The key to understanding the Tactical Orders Process is an understanding of the terms command and control. These terms are often used interchangeably. Their meanings, with regard to the tactical orders process, are very distinct. This difference is important and cuts to the heart of the tactical orders process issue. For an army to be successful the philosophy of command must support the way that it intends to fight.

Command and control is defined by U.S. Army Field Manual 101-5-1, October 1985, as:

"the exercise of command that is the process through

> which the activities of military forces are directed, coordinated, and controlled to accomplish the mission. This process encompasses the personnel, equipment, communications, facilities, and procedures necessary to gather and analyze information, to plan for what is to be done, and to supervise the execution of operations." [13]

There is no separate definition of "command," or separate definition of "control" in FM 101-5-1. Neither FM 100-5, Operations, or Armed Forces Staff College Publication 1, The Joint Staff Officer's Guide (1988), give a separate definition for "command" and "control." In both manuals "command and control" is always linked and defined as a unified concept. The Joint Chiefs of Staff Publication 1, defines command as: "The authority vested in an individual of the armed forces for the direction, coordination, and control of military forces....Functionally, it is a process for making decisions regarding the employment and sustainment of combat power." The same document defines control as "the process by which commanders and staffs direct the activities of their subordinate and supporting units and ensure that they are consistent with the will and intent of the commander."[14]

Command, therefore, is what commanders must do to be successful in combat. Command emphasizes mission tactics. To employ mission tactics, mission-type orders are issued. The effective use of mission tactics presupposes that commanders

have trained their subordinates in peace time to such a degree that they can be trusted to act independently. The trust that, if necessary, the subordinate will act to secure the commander's intent without excessive positive control, is the basis of command. This can only be learned if "control" is practiced in training.

"Control" is what commanders must practice in peacetime in order to be successful in combat. Control emphasizes detailed orders tactics. Control requires intensive management. It assumes that subordinates will make errors and will require more guidance, more time, more specifics, more training, more practice, and more control, to accomplish assigned missions. Control is a management technique that is bureaucratic in nature. Bureaucratic control is a time robber. But management is an essential element of effective combat training. It is during peacetime training, when the critical element of time should be in great supply, that "control" plays its vital role in preparing leaders and units for mission tactics.

Most commanders do not spend enough time controlling during peacetime training. Instead, they try to command their units too early. As a result, when they try to command in combat, they often fail because they have not controlled the education of their subordinates in the basics. Or they try to control in combat and run out of time. Mission tactics can only be accomplished if commanders have controlled their units in training.

In combat, however, not all units will be well trained or at the same level of training proficiency. Commanders will be able to command some subordinates and will be forced to control others based on the level of training. Unit rotations to the National Training Center (NTC) highlight this dilemma. If a unit goes to the NTC to test training, then the emphasis must continue on "control"; detailed orders with many detailed appendices and overlays. This is a continuation of training. If a unit goes to the NTC to test its war-fighting abilities, then the emphasis will be on "command"; mission-type orders that have much implied, and build on the training base of the unit.

The challenge to the military leader is to know the level of training of his forces and to consistently train them to progress to the particular orders style that supports his corresponding style of war. For the U.S. Army this style of war is represented by the doctrine of AirLand Battle.

AirLand Battle

AirLand Battle is the tactical and operational doctrine of the United States Army. To counter a concentrated, overwhelming, surprise Soviet attack in Europe, the U.S. military renounced the attrition style of war. AirLand Battle is the maneuver oriented solution to fighting outnumbered and winning. The term "AirLand Battle," was purposefully created to emphasize the total interdependency of the Army and the Air Force in modern combat.

AirLand Battle doctrine has four basic tenets; initiative, agility, depth and synchronization. Initiative is defined as the ability to set or change the terms of battle. Initiative demands decentralizing decision making authority "to the lowest practical level because overcentralization slows action and leads to inertia." [15] Agility is the ability of friendly forces to act faster than the enemy. Initiative stresses the ability to act and think faster than your opponent. Depth is the "extension of operations in space, time and resources."[16] Depth emphasizes the ability of friendly forces to conduct planning in time to degrade the enemy's freedom of action. This is often achieved by upsetting the enemy's plan. Synchronization is the "arrangement of battlefield activities in time, space and purpose to produce maximum relative combat power at the decisive point."[17] Synchronization involves the visualization of the battle, implicit coordination derived from an understanding of the commander's intent, anticipation, and unity of purpose.

Maneuver "is the dynamic element of combat...which enable smaller forces to defeat larger ones." [18] AirLand Battle doctrine seeks to defeat the enemy's plan and gain victory by maneuver. A key element of maneuver warfare is to think and act faster than you opponent. "It is based on securing or retaining the initiative and exercising it aggressively to accomplish the mission." [19] The end result of the application of maneuver warfare is the enemy's loss of cohesion to the point where he can no longer operate as an

effective fighting force.

The planning function of the leader is vital. Through his plan the leader transmits his intent to accomplish the unit's mission. AirLand Battle doctrine recognizes that the "most essential element of combat power is competent and confident leadership." [20] The leader establishes the dynamics of combat power through maneuver, firepower, protection and leadership. He unleashes this potential through his tactical plan.

To bring order out of chaos, maneuver warfare proposes that you try to adapt to the environment rather than to try to control it. Since centralized control is difficult, if not impossible, on the modern battlefield, maneuver warfare planning incorporates decentralized initiative, flexibility and quality trained leaders. Quality, trained junior leaders are a basic requirement for maneuver warfare. "Because modern combat requires greater dispersal of units, the quality and effectiveness of junior leaders has a proportionately greater impact." [21]

War in the 1990's and beyond will be more intense, chaotic and destructive than ever before. AirLand Battle doctrine recognizes this lethal and confusing environment by decentralizing control and emphasizing independent action. Implicit versus explicit understanding is expected. To accomplish this takes the kind of tactical planning that will enhance initiative, agility, depth and synchronization. The tactical orders process for AirLand Battle must, therefore, aid the leader in thinking and acting faster

than the enemy.

The Orders Continuum

The tactical orders process represents a dynamic pattern of actions. The effectiveness of a commander in executing this dynamic process depends on the level of training and cohesion, the style of warfighting, and the style of the orders process. The relationship of warfighting style to the orders process style is portrayed in Figure 2-1, the Orders Continuum.

In this continuum a unit's relative position will move above or below the vertical axis according to their corresponding style of warfighting. Units will move right or left of the horizontal axis according to their corresponding orders process style. An army that embraces maneuver warfare is most effective at the apex of the Maneuver Warfare - Mission Tactics quadrant. A army that embraces attrition warfare is most effective at the apex of the Attrition Warfare - Detailed Orders Tactics quadrant. The apex locations represent an ideal situation. Real armies will always fall somewhere short of these ideal locations.

A unit that attempts to adopt mission tactics, but has not reached the training level necessary to employ mission-type orders, will usually fail. The less trained the units are in receiving and executing mission tactics and using mission type orders, the more orders-intensive the units will become. The challenge to the military leader is to know the level of training of his force and to consistently train to progress to the end of the spectrum that

supports his army's war fighting philosophy.

ORDERS CONTINUUM

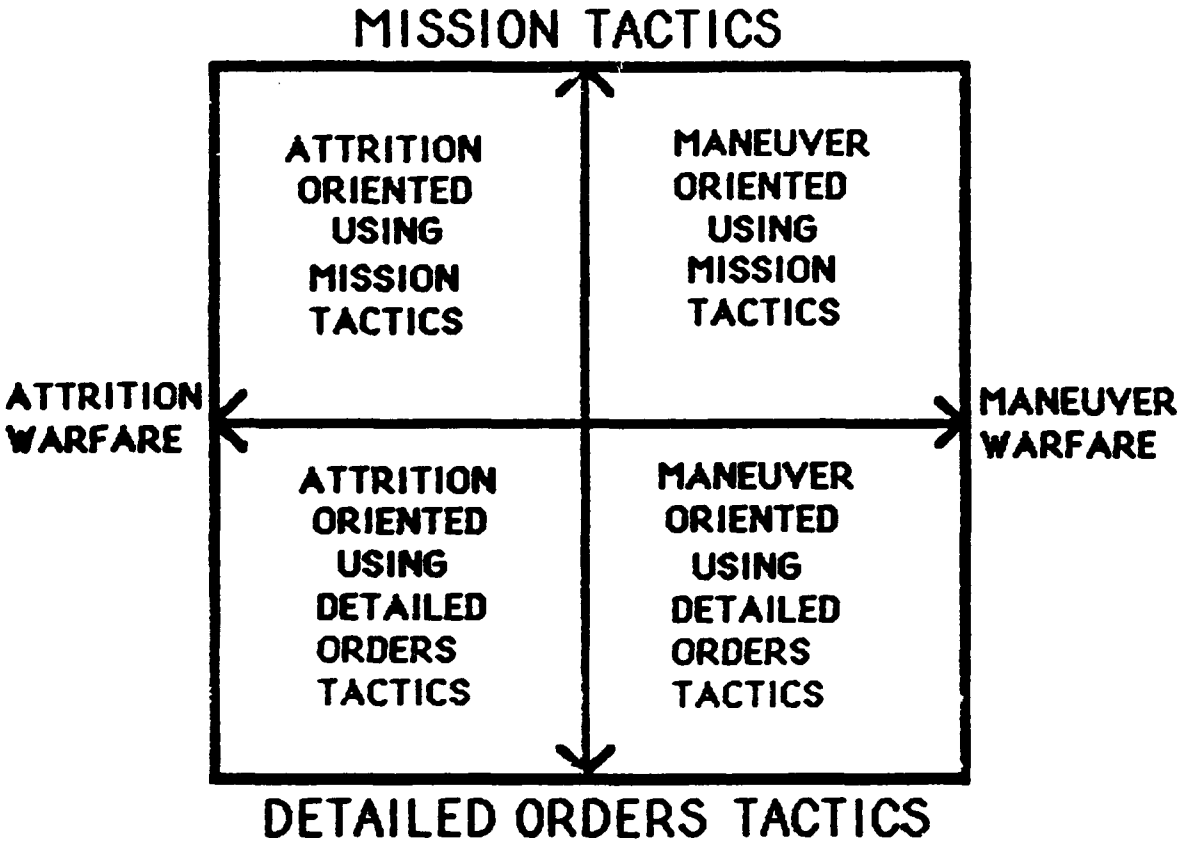


Figure 2-1

The different approaches to warfare, maneuver versus attrition, are informational and organizational decisions that have important ramifications on how an army fights. It is difficult to imagine, for example, how an attrition-based style of warfighting could generate the type of competent, aggressive leadership to execute mission-type orders. The tendency to have positive control over the maneuver of firepower, and the desire to force the plan to a successful conclusion, negates ability to respond quickly to battlefield opportunities, the hallmark of mission tactics.

"From the point of view of the command system, modern war is distinguished above all by its speed and by the need for close cooperation between many kinds of specialized troops." [22] Those units that can issue mission-type orders and employ mission tactics gain a valuable advantage over their opponents. Those who cannot usually find themselves out-maneuvered, out-thought and out-fought. "This means that, other factors being equal, a command system that allows for initiative on the lowest level, and for intelligent cooperation between subordinate commanders, is likely to be superior to one that does not." [23] Mission tactics, therefore, is the preferred method of command and control for the AirLand Battle.

Summary

Two opposing styles of warfare dominate the tactical level of

combat; "Attrition Warfare" and "Maneuver Warfare." Attrition emphasizes firepower and an orientation on terrain. Maneuver emphasizes mobility and an orientation on the enemy. Each style of war has a corresponding tactical orders process style. The orders process technique that best supports the attrition style of war is the system of "detailed-orders tactics." The orders process technique that best supports maneuver warfare is "mission tactics."

In detailed orders tactics, the plan is sacrosanct and attempts to cover each eventuality through centralized control. Leaders are expected to force the plan to work. In mission tactics, the plan is a basis for changes. Mission tactics aims at victory by maximizing the initiative of subordinate commanders who are trained to take advantage of fleeting opportunities and enemy mistakes. These styles and their corresponding tactical orders processes form a continuum that can help explain the command and control approaches of different armies to tactical situations. The continuum becomes useful in graphically displaying the "range" from which decisions are made and why.

Which technique offers the best solution to the problem of tactical command and control in the 1990's? Before this question can be answered the term "Tactical Orders Process" must be must defined and the need for a standard orders process must be established.

End Notes Chapter 2

[1] U. S. Department of the Army, FM 100-5 Operations, (Washington, D.C: U.S. Government Printing Office, 5 May, 1986), p. 14. Hereafter listed as FM 100-5.

[2] Martin van Crevald, Fighting Power, German and U.S. Army Performance, 1939-1945, (Westport, Connecticut: Greenwood Press, 1982), p. 35.

[3] U.S. Department of the Navy, FMFM1 Warfighting, (Washington, D.C: Headquarters United States Marine Corps, 6 March 1989), p. 28. Hereafter listed as FMFM 1.

[4] Colonel Hoang Ngoc Lung, Strategy and Tactics, (Washington D.C: U.S. Army Center of Military history, 1980), p. 71.

[5] Richard E. Simpkin, Race to the Swift, Thoughts on 21st Century Warfare, (London: Brassey's Defense Publishers, 1985), p. 20-22.

[6] FMFM 1, p. 29.

[7] Sir B. H. Liddell Hart, Strategy, (New York: Praeger Publishers, 1967), p. 348.

[8] Simpkin, p. 22.

[9] William S. Lind, Maneuver Warfare Handbook, (Boulder, Colorado: Westview Press, 1985), p. 19.

Lind's book offers an excellent treatise on maneuver warfare. The following illustrates this point:

"Firepower/attrition warfare uses firepower mostly the way the term implies, to reduce enemy numbers through attrition. Movement serves firepower; you move to a better firing position to

cause more attrition. Maneuver warfare uses both firepower and movement in maneuver context. What does this mean? Usually, you are moving not just to a better firing position, but to create a series of unexpected and dangerous situations for the enemy. Only this kind of maneuver qualifies as maneuver. The main role of firepower in maneuver warfare is to help you maneuver. Firepower is used most often to suppress the enemy while you move around or through him." 9

[10] General Bruce C. Clarke, Guidelines for the Leader and the Commander, (Harrisburg: Stakpole Books, 1963), p. 95.

Mission orders are not new to the U.S. Army. General Bruce C. Clarke, the hero of the Battle of the Bulge, employed mission orders throughout his long service in the U.S. Army:

"In World War II, those who served in armored divisions -- and probably in other units as well -- learned that mission-type orders were a requirement if the most was to be obtained from a command....As the battle becomes more complex and unpredictable, responsibilities must be more and more decentralized. Thus mission-type orders often will be used at all echelons of command and probably will be the rule at the division and higher levels. This will require all commanders to exercise initiative, resourcefulness, and imagination -- operating with relative freedom of action.

In our tactical forces we have built-in organizational flexibility. We must recognize this and capitalize on it in our orders. To get maximum combat power, we must have plans flexible enough to meet rapidly changing situations. But careful planning is not enough; this must be coupled with the readiness to change and adapt to situations as they are, not as they were expected to be.

Basically a mission type order needs to cover only three important things:

1) It should clearly state what the commander issuing the order wants to have accomplished.

2) It should point out the limiting or control factors that must be observed for coordinating purposes.

3) It should delineate the resources made available to the subordinate commander and the support which he can expect or count on form sources outside his command." p. 95.

[11] FMFM 1, p. 70.

[12] Major Fred During (ed) Captain G.B. Guenther, (Associate ed) Review of Military Literature, The CGSC Quarterly,Vol XV , (Fort Leavenworth, Kansas:1935), p. 142-143.

[13] U. S. Department of the Army, FM 101-5 Staff Organization and Operations, (Washington, D.C: U.S. Government Printing Office, October 1985), p. 1-17.

[14] U. S. Joint Chiefs of Staff, Joint Chiefs of Staff Publication 1-02, The Department of Defense Dictionary of Military and Associated Terms, (Washington, D.C: U.S. Government Printing Office, 1987), p. 2-1.

[15] FM 100-5, p. 15.

[16] Ibid., p. 16.

[17] Ibid., p. 17

[18] Ibid., p. 12.

[19] Ibid., p. 14.

[20] Ibid., p. 13.

[21] Ibid., p. 26.

[22] Crevald, p 35.

[23] Ibid., p. 35.

Chapter 3

The Need for a Standardized Tactical Orders Process

The command and control system must also stress standardized training in operations and staff practices to assure mutual understanding between leaders and units. [1]

United States Army Field Manual 100-5, Operations (1986), describes the tactical planning process as having four steps; 1) the definition of the mission, 2) the collection of information, 3) the development and analysis of options, and 4) the decision. Planning begins with the assignment of a mission from a higher headquarters or when a mission is deduced by the commander. Planning continues until the mission is completed, and then begins again in anticipation or preparation for the next mission.

The United States Army does not have a standard process for developing orders at the tactical level. Instead, the U.S. Army has several competing procedures and guides that are used by commanders and staffs for decision-making, estimate preparation, and orders production. These procedures are the "Troop Leading Procedures," the "Decision Making Process," various Staff and Commander Estimates of the Situation, and the "Problem Solving

and Command and Control Process." It almost appears that each "How to Fight Manual" prescribes its own peculiar decision-making process. It is clear that the U. S. Army needs a speedy and effective system to apply tactical decision making to the AirLand Battlefield. What is needed is one decision-making method that applies to all echelons of the tactical level.

The procedures of the tactical orders process should be a common skill for a modern army. These procedures should aim at producing effective, timely combat orders. The drill of receiving and issuing combat orders should assist, not inhibit, a unit's combat effectiveness. One standard thinking process, common to all military education programs, could clarify combat procedures and save time. A standardized combat orders process, therefore, is a critical step in achieving the initiative, agility, depth, and synchronization demanded by AirLand Battle.

The "Troop Leading Procedures"

The troop leading procedures have been used by generations of soldiers in the U. S. Army. The 1942 edition of FM 101-5, the Staff Officers Field Manual, described them as follows: First make an estimate of the situation. Then develop a plan to execute the decision. Next, by means of an order, issue instructions. Finally, supervise to insure that the operation is executed according to plan.[2] Simple and direct, the troop leading procedures were

designed to be used by a commander, with limited staff, to make speedy, battlefield decisions.

The troop leading procedures are the basis for the command and control process in the United States Army. These procedures were designed to be used by commanders, primarily at the small unit level. The procedures to are a guide to plan, coordinate, execute and supervise tactical operations. The Troop Leading Procedures represent an effective method that has a long tradition in the U. S. Army. "Follow the troop leading procedures. They work. Not following these procedures almost always creates problems." [3] The current Troop Leading Procedures are shown below in Figure 3-1:

Troop Leading Procedures

1. **Receive the Mission**
2. **Issue Warning Order**
3. **Make a Tentative Plan**
4. **Start Movement**
5. **Reconnoiter**
6. **Complete Plan**
7. **Issue Plan**
8. **Supervise**

Figure 3-1

U.S. Army Field Circular 71-6 Battalion and Brigade Command and Control, dated 1 March 1985, stressed that the "troop leading

procedures form the basic framework the commander routinely uses to make timely decisions and supervise the execution of the mission. Staff input during this process will be accomplished as time and the situation permit."[4] Doctrine does not restrict the use of the Troop Leading Procedures to commanders only. The intent of the troop leading procedures, however, is largely reserved for the leader or commander who does not have staff.

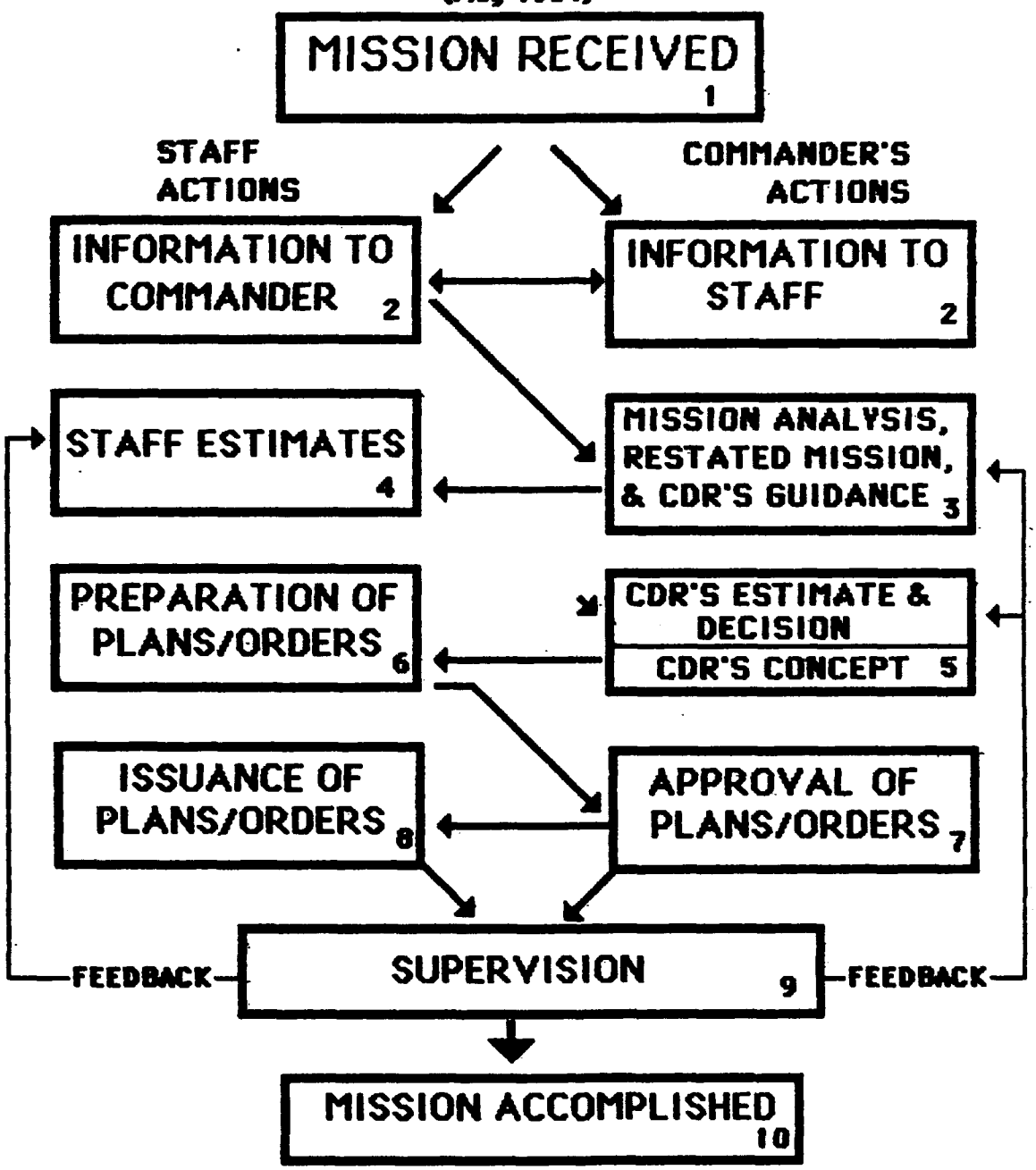
The "Decision Making Process"

The orders process is labeled the "Decision Making Process" in U.S. Army Field Manual 101-5, Staff Organization and Operations, dated 25 May 1984. The "Decision Making Process" was primarily intended as a "staff procedures guide" for use at the higher tactical level (Division and Corps). FM 101-5 describes the "Decision Making Process" in detail as a procedure used by the commander and staff. "The commander and staff use the military decision making process to arrive at and execute tactical decisions." [5]

The "Decision Making Process" of FM 101-5, Staff Organization and Operations, prescribes a step by step approach to exchange timely and accurate information, to develop estimates (which lead to logically correct tactical decisions), and to create and issue plans and orders. It is described as a series of actions that forms a continuous cycle and is listed in Figure 3-2.

Decision Making Process from FM 101-5

(May 1984)



NOTE: In time critical situations, the commander may be forced to complete his estimate based on his personal knowledge of the situation and issue oral orders to his subordinates.

FIGURE 3-2

The purpose of this process is to quickly focus the energy of the tactical planners to develop a correct tactical decision and implement that decision in the shortest possible time. The goal of the process is a synchronized operation that secures the commander's intent. An improvement of the "decision Making Process" was published in 1989 in Student Text 100-9, The Command Estimate, by the Command and General Staff College at Fort Leavenworth, Kansas and is listed in Figure 3-3.

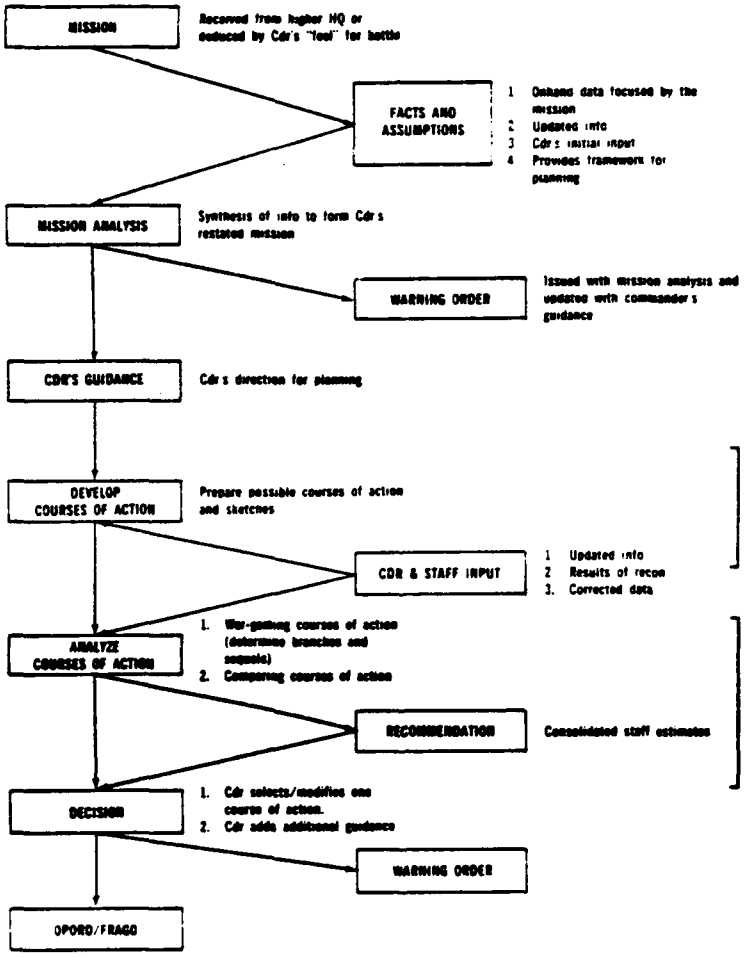


Figure 3-3

The "Problem Solving and The Command and Control Process"

To simplify the contradiction posed by various tactical orders processes, FM 101-5 is being rewritten. A draft circular, TC 101-5 dated 2 November 1988, added a "problem solving process" and renamed the "military decision making process" as the "command and control process." Both of these are listed in Figure 3-4 and 3-5.

The "problem solving process" proposed by TC 101-5 added a new logical approach to looking at military problems. Unlike the "troop leading procedures" or the "military decision making process" the "problem solving process" seemed to define a "decision cycle" approach to problem solving. The problem solving process consists of "following these logical and orderly steps: 1. Recognize the problem, 2. Gather facts and make assumptions to determine the scope of and solution to the problem, 3. Develop possible solutions, 4. Analyze and compare possible solutions, 5. Select the best solution available, and 6. Implement the problem solution."[6] The process describes basic decision making strategies and methods such as "brainstorming and freewheeling."

TC 101-5

STAFF ORGANIZATIONS AND OPERATIONS

(OCTOBER 1988)

PROBLEM SOLVING PROCESS

1. RECOGNIZE AND DEFINE THE PROBLEM.

2. GATHER FACTS AND MAKE ASSUMPTIONS TO DETERMINE THE SCOPE AND SOLUTION TO THE PROBLEM.

3. DEVELOP POSSIBLE SOLUTIONS.

4. ANALYZE AND COMPARE POSSIBLE SOLUTIONS.

5. SELECT THE BEST SOLUTION AVAILABLE.

6. IMPLEMENT THE PROBLEM SOLUTION.

Figure 3-4

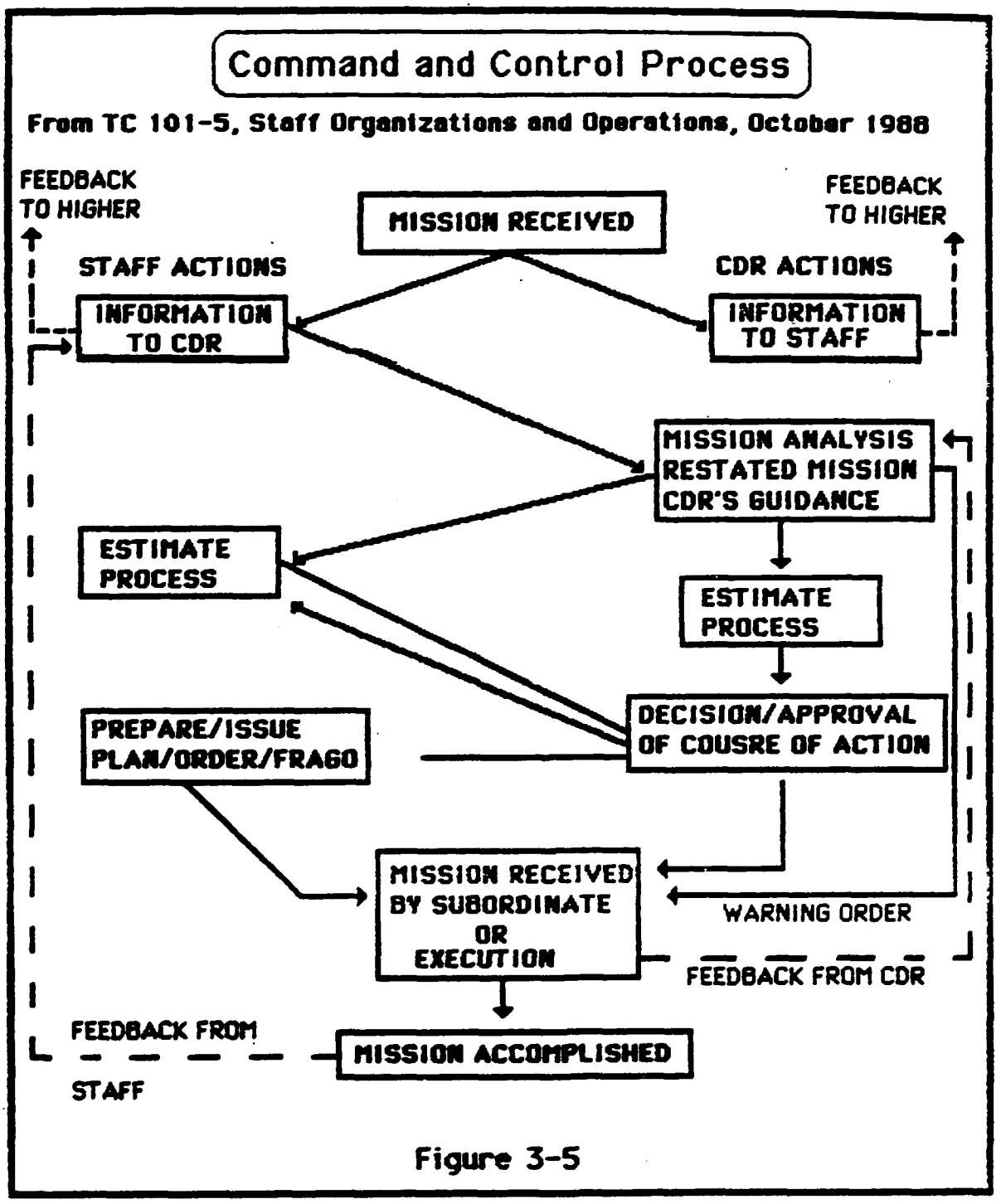

Command and Control Process
From TC 101-5, Staff Organizations and Operations, October 1988
FEEDBACK TO HIGHER
MISSION RECEIVED
FEEDBACK TO HIGHER
STAFF ACTIONS
CDR ACTIONS
INFORMATION TO CDR
INFORMATION TO STAFF
MISSION ANALYSIS RESTATED MISSION CDR'S GUIDANCE
ESTIMATE PROCESS
ESTIMATE PROCESS
DECISION/APPROVAL OF COUSRE OF ACTION
PREPARE/ISSUE PLAN/ORDER/FRAGO
MISSION RECEIVED BY SUBORDINATE OR EXECUTION
WARNING ORDER
FEEDBACK FROM CDR
FEEDBACK FROM STAFF
MISSION ACCOMPLISHED

Figure 3-5

What is Used in the Field

The result of too many different procedures printed in several publications has been confusion. With several different procedures it is not surprising that units in the U.S. Army use a variety of techniques to produce combat orders. Each battalion, brigade and division uses a different set of procedures. More significantly, these procedures change with the personalities of the operations officers and commanders, resulting in a rate of change that insures continued inefficiency.

Briefing intensive and slow, the "Decision Making Process" of FM 101-5 is largely ignored. The same can be said for the Commander's Estimate of ST 100-9. Most tactical commanders at Brigade level and below employ the trusted "troop leading procedures." Most units do not understand or teach the military "Decision Making Process," the "problem solving process" or the "command and control process." The general conclusion of most staff officers and commanders is that the current doctrine on the tactical orders process is inadequate and not suited to the modern war.

Until the final version of the new FM 101-5, Staff Organizations and Operations is distributed, ST 100-9, The Command Estimate, a Fort Leavenworth Student Text, is considered to be the primary guide for the tactical orders process for the army. In the meantime, most units have taken the

characteristic American approach towards individualism and developed their own version of the orders process. Units in the field seek their own systems in order to fill the void left by confusing doctrine. These field expedient answers are not standardized throughout the army and are often not standard within the same division or brigade. The result is a serious inability to speak a common language concerning tactical planning in the U.S. Army.

The general trend in the U.S. Army is to produce ever more detailed and complete written orders. The minimum products of an operations order, that prescribe product and priority of accomplishment, have not been established in doctrine. General norms for orders production are left to the discretion of commanders. The result is a ponderous and slow orders process that does not meet the speed, agility and flexibility requirements of the Army's AirLand Battle doctrine.

U. S. Army maneuver battalions routinely issue six to ten-page written operation orders with two to four sheet matrices and four to six overlays to company commanders. This tremendous amount of paperwork is generated because doctrinal techniques require detailed synchronization and active control. The process is slowed further by a system that focuses on putting plans in writing. The reproduction of a ten-page order, with two to three overlays, in twenty or so copies, takes an enormous amount of

time and officer and NCO involvement. Orders reproduction times at brigade are often four to six hours and two to four hours for battalions. [7]

The fighting edge of the U. S. Army, the tactical units at division level and below, simply do not plan for combat operations in a standardized, systematic process. Time is not effectively managed. Synchronization techniques are often not planned for, or are transmitted too late. **Too much time is wasted using procedures that emphasize the combat order as a final product of the orders process.** The result, as measured at the Army's tactical proving grounds, the National Training center at Fort Irwin, California, is often confusion and defeat. "Superior performance in combat...depends on a well-understood doctrine for fighting." [8] It is obvious that a clear doctrine concerning the orders process must be established to eliminate this confusion.

"Deliberate" verses "Time Sensitive" Planning Process

So far , we have reviewed several U. S. Army decision making and estimate processes that have, for varying reasons, forced the Army to consider rewriting the Staff Organizations and Operations manual. Are there other sources of planning guidelines that can meet the needs of the tactical orders process for Airland Battle?

One possible solution lies in the arena of Joint Service

planning. The Armed Forces Staff College, Publication 1, The Joint Officer's Staff Guide, dated 1 July 1988, is the "joint" version of Army Field manual FM 101-5, Staff Organization and Operations. As a Joint Service manual, it reflects the views of the combined services in the areas of planning. Although The Joint Officers Staff Guide is primarily focussed on the strategic and operational level of war, many of the principles apply to the tactical level as well. A case in point is the concept of "Deliberate" verses "Time Sensitive" Planning.

Deliberate planning is designed to occur during peacetime and deals primarily with the development of operation plans. Joint deliberate planning involves a five step process:

Deliberate Planning Process

1. **Step I - Initiation (receive mission & designate forces)**
2. **Step II - Concept Development (Mission statement deduced, subordinate tasks derived, concept of operation developed, -- The product: a Concept of Operations)**
3. **Step III - Plan Development (forces are selected and time phased, support requirements are computed, war gaming, shortfalls identified, -- The product: a Completed Plan)**

4. Step IV - Review the Plan (OPLAN is reviewed & approved , Commander revises plan, -- The product: an Approved Plan)

5. Step V - Supporting Plans (supporting plans are prepared, the Product: a Family of plans) [9]

The Time Sensitive Planning process, on the other hand, is designed for situations when time is critical. "For contingencies not anticipated by deliberate planning, joint planners and operators are likely to be in a NOPLAN situation and must develop COAs (Course of Actions), a concept of operations, and a deployment database using force modules."[10] This concept of planning fits more closely to the needs of the tactical orders process. The Time sensitive Planning Process is described below:

Time Sensitive Planning

Steps	Product
1. Step I - Situation Development	
2. Step II - Crisis Assessment	Warning Order
3. Step III - Course of Action Development	
4. Step IV - Course of Action Selection	Alert Order
5. Step V - Execution Planning	
6. Step VI - Execution	Execution Order

Although promising, the adoption of the Deliberate and Time Sensitive Joint Planning Process for the tactical orders process model is inadequate. The Deliberate Process, which may have merit in developing tactical level Operation Plans in peacetime, is not intended for wartime application. The Time Sensitive Planning Process, with its emphasis on Crisis Assessment as a separate step, focuses on a level above division level. During combat, every situation is likely to reach the definition of a "crisis." The use of "Joint" planning procedures, however, is an alluring option that could go a long way to stabilize the turbulence in the orders process problem. **The most valuable aspect of the Joint planning procedures, however, is the emphasis on available planning time as a criteria for orders development.**

Combat Operations Process Model

In 1983, United States Air Force Major George E. Orr developed a Combat Operations Process Model in his report on Combat Operations C3I: Fundamental and Interactions, while a student at the Air University, at Maxwell Air Force Base, Alabama. This excellent report, studied the American style of war and investigated the combat operations process, the function of the command process, and the proper role of the C^3I (Command, Control, Communications and Intelligence) in supporting the

commander. In his report he develops a "power distribution model, the combat operations process model, and the military-problem solving model."[11]

Major Orr's "Military Conceptual Combat Operations Process Model," integrates both the command and intelligence aspects of the orders process. This model deals with both the planning and execution process of combat operations. The Conceptual Combat Operations Process Model is shown in Figure 3-7.

THE CONCEPTUAL COMBAT OPERATIONS PROCESS MODEL
BY MAJOR GEORGE E. ORR

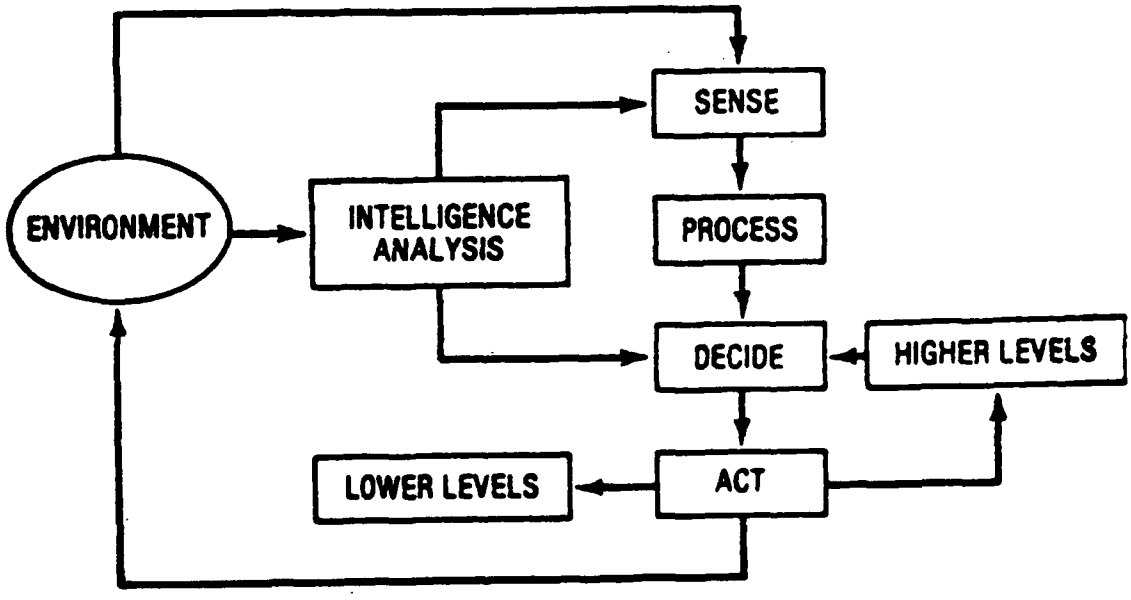


Figure 3-7

Orr believed that command in combat is the ability to apply the dynamics of combat power to accomplish the mission in a situation where the enemy has the option of multiple objectives. Opposing commanders attempt to apply simultaneously the elements of combat power to a given situation. War, in short, is a two-sided business, and each decision cycle (Observe, Orient, Decide, Act) by one side is opposed by the decision cycle (Observe, Orient, Decide, Act) of the opposing side. Any theory of war must include this dynamic competition.

Command, control, communications and intelligence are essential functions of the commander. Any process that assists the commander in these functions, and exploits the random nature of modern combat, can gain a time advantage over the opponent. Such a system must also emphasize the traditional strengths of American fighting units, the American way of war, and the American character. Here, Major Orr stresses the adoption of what we now know as AirLand Battle when he says:

> . . . .analysis of combat in which inferior forces manage to win in spite of the odds against them suggest that ingenuity, initiative, and esprit de corps have been keys in most of these cases. These are qualities Americans like to identify as national strengths, and the military command style most appropriate for America should be designed to capitalize upon these strengths. A hierarchal control style seems to stifle all three characteristics. [12]

Summary

The U. S. Army desperately needs a process to assist commanders in the procedures of issuing effective combat orders. The confusion concerning the format and procedures of the current military decision making process drives the requirement for a simplified, standard orders process that can provide a commander and staff a system to issue quick and effective orders. This orders process must work for all the echelons of tactical command in the U. S. Army. It should emphasize the criticality of time. In addition, it should permit the commander a tool to go beyond the planning phase and assist him in making decisions during the execution phase of an operation. The key to understanding the future often rests in a thorough understanding of the past. In the next three chapters we will analyze how armies in this century dealt with the orders process dilemma. By evaluating the Wehrmacht, Soviet and American orders process against the requirements of current U. S. Army doctrine we will develop a tactical orders process for AirLand Battle.

End Notes Chapter 3

[1] U. S. Department of the Army, FM 100-5 Operations, (Washington, D.C: U.S. Government Printing Office, 5 May, 1986), p. 21. Hereafter listed as FM 100-5.

[2] War Department, FM 101-5 The Staff and Combat Orders, Staff Officers Field Manual, (Washington: Government Printing Office, 24 March 1942), p. 36. The following quotation from the 1942 manual highlights this process:

"The solution of any situation demanding action by a unit requires that certain definite steps be taken by the commander in logical sequence. He must first make an estimate of the situation. The commander next evolves a plan to put his decision into effect. Then, by means of orders he conveys instructions to his subordinates who are to execute the planned operation. **His final step is supervision to insure conduct of the operation in accord with his orders.**" p. 36,

[3] Combined Arms Training Notes, (Fort Leavenworth, Kansas: Winter 1984), p. 28.

[4] U. S. Army Infantry and Armor Schools, FC 71-6, Battalion and Brigade Command and Control, (Fort Benning, Georgia and Fort Knox, Kentucky: United states Army Infantry School and United states Army Armor School, 1 March, 1985), p. 2-4.

[5] U. S. Department of the Army, FM 101-5 Staff Organization and Operations, (Washington, D.C: U.S. Government Printing Office, 25 May, 1984), p. 5-4.

[6] U. S. Department of the Army, Training Circular 101-5 Staff Organizations and Operations, (Washington, D.C: Headquarters, Department of the Army, 30 October, 1988), p. 4-1.

[7] paraphrased from Memo by Col Molinari, 4 June 1989

[8] FM 100-5, p. 5.

[9] National defense University, The Joint Staff officers Guide, Armed Forces Staff College Publication 1, (Norfolk, Virginia: Armed forces Staff college, 1 July 1988), p. 246-247.

[10] Ibid., p. 247.

[11] George E. Orr, Combat operations C3I: Fundamentals and Interactions, (Maxwell Air Force Base, Alabama: 1983), p. 90.

[12] Ibid., p. 89-90.

Chapter 4

The Wehrmacht Approach

The first demand in war is decisive action. Everyone, the highest commander and the most junior solder, must be aware that omissions and neglects incriminate him more severely than the mistake of choice of means. Heers Dienstvorschrift 300 Truppenfuhrung (German Army Regulation 300, Command of Troops) 1936 [1]

Victory demands decisive action. Clear, succinct and timely orders, by themselves, do not guarantee decisive action; but few, if any, victories can be won with muddled or confusing combat instructions. A commander executes combat operations by means of his tactical orders process. The tactical orders process of the German Army has historically been a key element to German tactical success. If victory is taken as a measure of quality, the quality of the German tactical orders process must rank with the very best.

"During the latter half of the nineteenth century and the first half of the twentieth, one factor consistently influenced European affairs: Prussian-German military excellence." [2] The historic prowess of the German Army was vividly demonstrated by the Wehrmacht during the Second World War. "Its campaigns in France (1940), Russia (1941), and North Africa (1941 and 1942) are still regarded as masterpieces of the military art and have indeed

become almost legendary. Its operations in Norway (1940) and Crete (1941) are examples of smaller scale triumphs achieved through hair-raising boldness." [3]

What is more extraordinary is the fact that the German Army achieved these victories "in the teeth of considerable numerical odds, and, as often as not, inadequate logistic preparations." [4] Fighting virtually the entire world on multiple fronts, "aided" by unreliable allies, ceaselessly hammered day and night from the air, blockaded by sea, and forced to fight under the irrational leadership of one all-knowing "Fuhrer," the German Army continued to fight right up to the final Battle of Berlin in May, 1945. Although Germany lost the war, the Wehrmacht did not run. "It did not disintegrate. It did not frag its officers. Instead it doggedly fought on....It fought on for years after the last hope for victory had gone....Yet for all of this, its units, even when down to 20 percent of their original size, continued to exist and to resist -- an unrivaled achievement for any army."[5]

The Wehrmacht's tactical orders process was the product of three essential German concepts; the institution of the German General Staff, the philosophy of "Forward Command" and the concept of "mission tactics" or ***Auftragstaktik*** It was the high standard of the tactical orders process which enabled the Wehrmacht to wage successful maneuver warfare. "It was the principle of control by directives ***(Auftragstaktik)*** giving commanders of all levels 'long distance tickets' which, together with the thorough and uniform standard of General Staff training,

exploited creativity and responsible independence to the utmost." [6] A detailed account of the historical development of the Wehrmacht, with regards to the tactical orders process, is found in Annex A.

Wehrmacht Doctrine and the Orders Process

A thorough understanding of the Wehrmacht's tactical orders process is not possible without an understanding of how the Germans expected their process to work. The German Army's view of the tactical orders process is outlined in the official 1933 manual ***Truppenfuhrung*** ("Command of Troops"). This two volume regulation is signed by two successive commanders in chief. These regulations explain the German concept of war and elaborate techniques to conduct the tactical orders process.

The ***Truppenfuhrung*** stresses decisive action. Decisive action is achieved by the decentralized action of subordinate commanders who are guided by their commander's intent. The ***Truppenfuhrung*** clearly establishes the commander's role in issuing orders in time to act faster than the enemy. It emphasizes clarity over technique. The following quotations are taken directly from the ***Truppenfuhrung*** (bold lettering is the author's emphasis):

> 36. The mission and situation form the basis of the action. The mission designates the objective to be attained. The leader must never forget his mission. A mission which indicates several tasks easily diverts

from the main objective.

37. The decision arises from the mission and the situation. Should the mission no longer suffice as the fundamental of conduct or is changed by events, the decision must take these considerations into account. He who changes his mission or does not execute the one given must report his actions at once and assumes all responsibility for the consequences. He must always keep in mind the whole situation ....**However, in the vicissitudes of war an inflexible maintenance of the original decision may lead to great mistakes.** Timely recognition of the conditions and the time which call for a new decision is an attribute of the art of leadership.

The commander must permit freedom of action to his subordinates insofar that this does not endanger the whole scheme....

68. The more pressing the situation, the shorter the order. **Where circumstances permit, oral orders are given in accordance with the terrain, not the map.** On the front lines and with the lower commanders this is particularly so.

73. An order should contain everything a subordinate must know to carry out his assignment independently, and only that. Accordingly, an order must be brief and clear, definite and complete, tailored to the understanding of the recipient and, under certain circumstances, to his nature. The person issuing it should never neglect to put himself in the shoes of the recipient.

75. **Orders may bind only insofar as they correspond to the situation and its conditions.**

76. Above all, orders are to avoid going into detail when changes in the situation cannot be excluded by

the time they are carried out....

77. **In so far as the conditions permit, it is often best for the commander to clarify his intentions to his subordinates by word of mouth and discussion.** [7]

Operating under a mission-oriented command system that embraced mission tactics as the guiding principle of tactical success, the Wehrmacht's tactical orders process was verbal, streamlined and flexible.

The goal was to designate the mission and leave the details in the hands of able, subordinate leaders. With this philosophy, the Wehrmacht was consistently able to get inside the enemy's decision cycle and act faster than its opponents. This point is clearly established in a quote from Major General J. F. C. Fuller where he describes the Wehrmacht's 1940 campaign in France in his book, A Military History of the Western World:

> The speed with which the enemy exploited his penetration of the French front, his willingness to accept risks to further his aim, and his exploitation of every success to the uttermost limits emphasized, even more fully than in the campaigns of the past, the advantage which accrues to the commander who knows how best to use time and to make time his servant and not his master. [8]

The Wehrmacht Operations Order

A typical German Operations order, as shown in Manual For

Command and Combat Employment of Smaller Units, based on German experience in World War II, is shown in Figure 4-1. Every German commander was expected to conduct an estimate of the situation. The estimate of the situation consisted of; a) Estimate of the Enemy, 2) Estimate of Friendly Forces, and 3) An Evaluation of the Terrain. The Estimate of the Situation was followed by the "Decision". The transformation of the decision into a tactical action was accomplished by means of the order. The order contained all the factors that changed the existing situation into the situation necessary to carry out the decision. [9]

The operations order "must contain all knowledge that is necessary for its execution. It must not contain anything unnecessary or anything apt to decrease its clarity." [10] The typical Wehrmacht operations order consisted of the following components: 1) The enemy situation, 2) the friendly situation, 3) friendly intentions of the next higher unit, 4) the organization and the combat mission of each subordinate unit or weapon (in order of infantry, armor, supporting armor, reserves, antitank defense, artillery, engineers, signal communication, and supply troops), 5) supply (ammunition, fuel, equipment, arms, rations, clothing, equipment and the evacuation of sick and wounded), 6) the location of the command post. [11]

COMPOSITION OF A TYPICAL WEHRMACHT OPERATIONS ORDER

(From Manual for Command and Employment of Small Units)

1. ENEMY SITUATION

2. FRIENDLY SITUATION AND FRIENDLY INTENTIONS.

3. GENERAL PLAN

ORGANIZATION AND COMBAT MISSION OF EACH SUBORDINATE UNIT OR WEAPON. ATTACHMENTS AND/OR DETACHMENTS ARE DISCUSSED IN DETAIL.

4. DETAILED PLAN

A CLEAR EXPLANATION OF THE EXTENT THAT THE UNIT IS TO PARTICIPATE IN THE EXECUTION OF THE HIGHER COMMANDER'S INTENT. SPECIFIC DETAILS TO SUCH MATTERS AS RECONNAISSANCE, MISSIONS, SUPPLY AND EVACUATION, COMMUNICATIONS, AND THE COMMAND POST.*

* As to reconnaissance, the detailed plan mentions the enemy information desired, the areas to be reconnoitered and by whom and when, the time and place where resulting reports are to be sent, and the sequence of reconnaissance according to their urgency. As to missions, what each unit with indicated attachments or detachments must fulfill is clearly stated. In respect to supply and evacuation, the definite functioning of agencies in relation to the combat elements specified. As regards communications, the axis of communications for the unit publishing the order is indicated, and special instructions, such as those pertaining to the use of radio or existing commercial nets are included. As for command post, the location of the commander's headquarters and the time when it opens or closes, etc., are given. pp. 23-26.

Figure 4-1

The amount of detail of the operations order and the exact format was left to the discretion of the commander issuing the order. The difference in detail was a matter of time and confidence. Time was saved by emphasizing the intent of the orders rather than specifying how things were planned to occur. "Orders must convince the troops even without explanations. For them to to this, prior discussions with subordinates or discussions before execution of the order are indispensable." [12]

Commanders were expected to personally brief their subordinates and ensure that the intent was clearly communicated. Subordinates were expected to explain their instructions to their commanders to insure understanding. A "brief back" technique was employed to give the subordinate leader every opportunity to "...clear up any doubts he may have had and, having acquired an idea of the general situation, he will be able to act according to the intentions of the commanding officer if the situation should change." [13]

The operations order, **at division level and below**, was almost always issued verbally, by the commander, preferably overlooking the ground on which the battle would be fought. Maximum use was made of warning orders to give the troops plenty of time to prepare for combat and to initiate movement. Parallel planning techniques, where each subordinate echelon of command began planning as soon as the warning

order was received, was normal procedure. Often, a written order was only prepared after the operation was conducted in order to

have a record for the units official history.

The level of detail required in the combat order was determined by the level of proficiency of the leaders and troops. Well trained units with experienced commanders needed few instructions. They were expected to think and accomplish the mission. "The order tells its recipient to what extent he and the troops under him are to participate in the execution of the intentions of the higher headquarters." [14] For these types of units, an identification of their mission and the higher commander's intent was all that was needed. For poorly trained units with mediocre leadership, more detail was required. [15]

The result was an orders process that achieved a remarkably short decision cycle. In Russia, during World War II, German division commanders were able to receive orders at 2200 and issue their own orders to the regiments by 2400. **In effect, the Germans operated on a 2 hour, division-echelon, decision cycle**. "Division, corps, and army staffs were small and contained few decision-makers. The decision process was usually very fast and not characterized by exhaustive details and analyses by the staff and specialists. This was accompanied, however, by very competent and detailed ongoing staff work and superb staff planning and execution once decisions had been made." [16]

The following quote, from an interview taken in 1979 with Major General F.W. von Mellenthin, highlights the employment of mission tactics at its best. Mellenthin's statement gives the proponents of detailed order tactics, proponents who visualize the

control of combat forces by more efficient information processing systems, some important food for thought:

> Bill Rennagel: General, in mobile operations in maintaining a fast tempo, how does one...well, you talked a little bit about command and control, but more importantly, what are the coordination mechanisms that the staff and commander have to resolve to keep the ***Schwerpunkt*** going in the direction and to the objectives that you want? Can you sort of just generalize about those kinds of control mechanisms?
>
> von Mellenthin: You know, in a tank division there are no written orders. There are only verbal orders and the commander of the division can have assistant officers with radio connection to him at the place of the various regiments which inform him about movement. This keeps him informed, by radio.
>
> Pierre Sprey: I would like to add a question to that. What would be your impression of the effect on operations and the effect on the speed of your divisions and the mobility of your divisions if you had to transmit all your orders by teletype --- perhaps via a computer.
>
> von Mellenthin: Forget about it. [17]

The Wehrmacht orders process, as derived from Manual For Command and Combat Employment of Smaller Units, and based on German experiences in World War II, is shown in Figure 4-2.

Wehrmacht Tactical Orders Process

(As derived from Manual for Command and Combat Employment of Smaller Units)

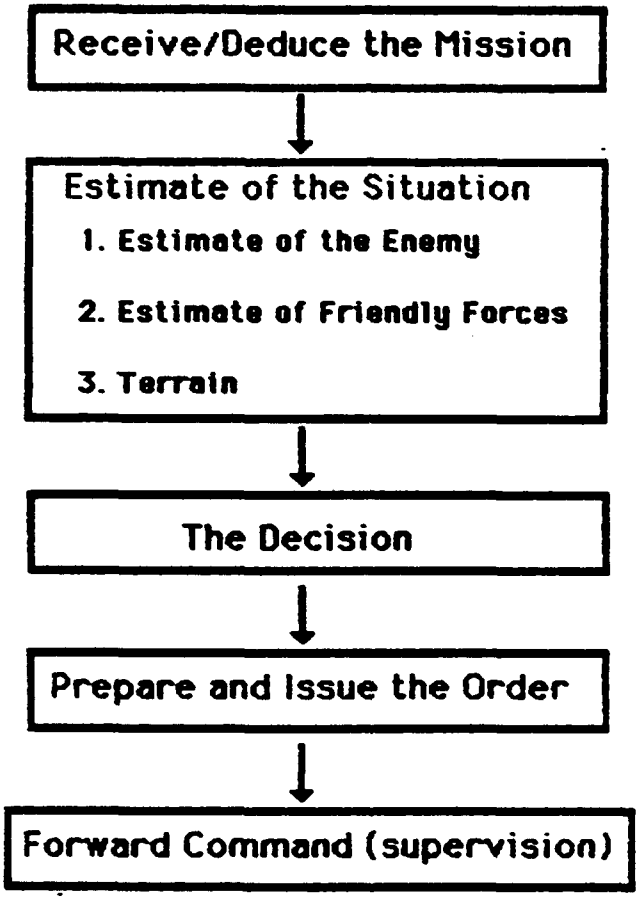


Figure 4-2

Tactical Example

A useful way to bring this subject to life is to illustrate how the Germans conducted their tactical orders process by describing the process during a typical a small unit action. Our example is explained in the Department of the Army Pamphlet, Small Unit Actions during the German Campaign in Russia. This pamphlet was written under the supervision of General Franz Halder, Chief of the German Army General Staff from 1938 to 1942. As a direct source narrative, it shows those actions that the Germans felt were valuable lessons learned in fighting with the Russians.

The example for our study involves the 3rd German Panzer Division, operating against the Russians in 1944. The tactical situation is shown in Figure 4-3.

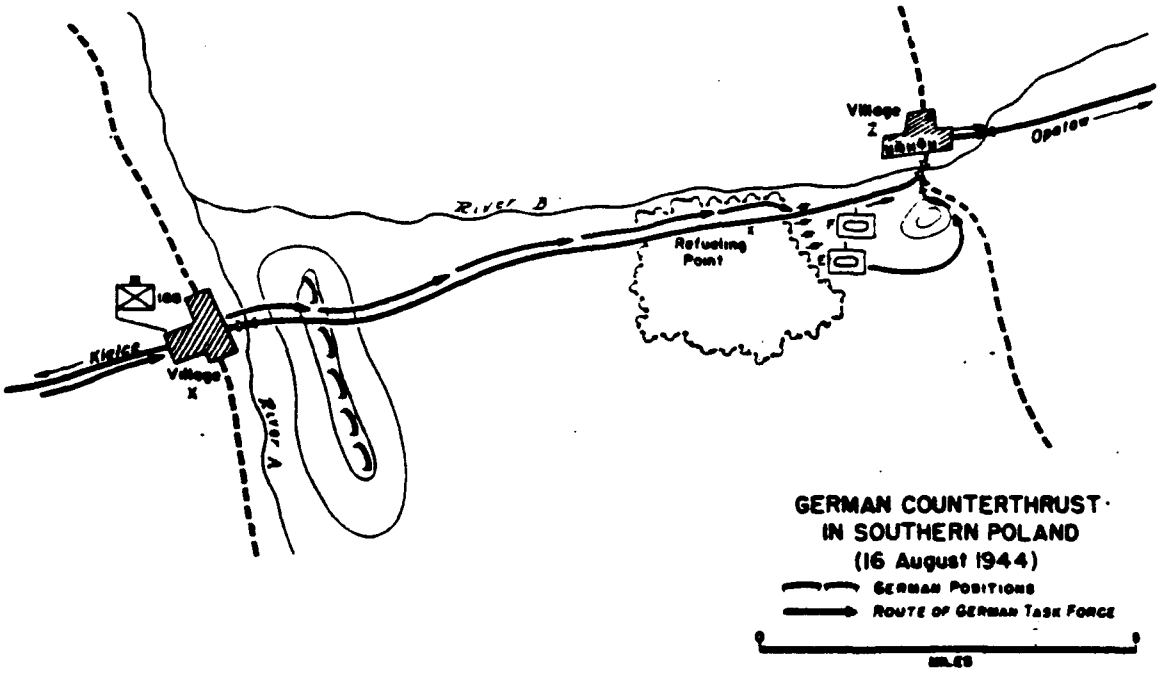


Figure 4-3

The German 3rd Panzer Division, recently moved in by train, was operating against the Russians near the southern Polish town of Kielce during the 13th and 14th of August 1944. "The divisions mission was to stop the advance of Russian forces that had broken through the German lines during the collapse of Army Group Center and to assist the withdrawing German formations in building up a new defense line near the upper Vistula." [18]

To speed up the deployment of his division, the division commander formed an armored task force to secure his route of advance. The force was led by the commander of the 2d Tank Battalion, consisting of two companies of Panther tanks, one panzer grenadier company in SdKfz ***(Sonderkraftfahrzeug)*** 251 halftracks, and one battery of 105 mm self propelled howitzers. The task force was to launch a surprise attack on Village Z and seize the bridges south and east of the village in order to allow the main body of the division to advance along the Kielce - Opatow road toward the Vistula River.

Air reconnaissance information was obtained on at 1800 (6:00 P.M.) on 15 August that showed Village Z to be lightly defended. No major troop concentrations were found in the area. The only German unit in the area was the 188th Infantry Regiment. At 2000 (8:00 P.M.) on 15 August the task force commander received his orders. Sunrise would occur at 0445 (4:45 A.M.). Sunset would occur at 1930 (7:30 P.M.).

The task force commander immediately began to study a plan of attack on Village Z. Since his units had not yet been alerted of

the mission, he would be unable to move out before 2300 (11:00 P.M.). The maximum speed his forces could safely drive at night, without the aide of headlights, over dusty roads, was six miles per hour. The approach march to Village Z would take, therefore, approximately five hours. Taking into account refueling and deployment time, the commander came to the conclusion that he could not attack before dawn. Since he would lose the advantage of surprise, the task force commander decided to send forward an advance guard, a tank company reinforced with one panzer grenadier platoon, ahead of the main body of the task force.

At 2020 (10:20 P.M.) the task force commander assembled his orders group and issued his orders. **He did not write them out, he issued verbal orders.** He ordered the advance guard to seize Village Z and the two bridges across River B. He ordered a reconnaissance unit to direct the advance guard as far as Village X. Two gasoline t. ucks were to accompany the advance guard and refuel the small force two mile west of Village Z. The main body of the task force would follow the advance guard at 2300 (11:00 P.M.). The task force commander directed that the advance guard commander accompany him to the command post of the German 188th Infantry Regiment in contact in the area, at 2100 (9:00 P.M.). The advance guard commander, a Lieutenant Zobel, immediately started planning for his new mission.

Zobel returned to his unit, assembled his platoon leaders, first sergeant, and maintenance support chief, and briefed them. He indicated the march route, which they copied on their maps, and

ordered the ranking platoon leader to command the column as far as Village X while he accompanied the task force commander to the 188th Infantry Regiment. Zobel arranged for hot coffee to be served to his troops at 2130 (9:30 P.M.).

The reconnaissance detachment was to move out at 2130 and post guides along the road to Village X. Start time was set for 2200 (10:00 P.M.). Zobel then met the task force commander at 2130 (9:30 P.M.) and accompanied him to the command post of the 188th Infantry Regiment. There, they were given detailed information concerning the enemy. This information confirmed the original plan of attack. The task force commander ordered Zobel to carry out the attack as planned.

At 0145 (1:45 A.M.), Zobel met the advance guard at the outskirts of Village X. He reformed the march column with tanks leading. At 0230 (2:30 A.M.) Zobel linked up with the most forward reconnaissance detachment. The guides gave Zobel an intelligence update and reported that they had observed no Russian movement during the night. At 0345 (3:45 A.M.) Zobel halted in the woods and refueled his vehicles.

While the refueling was going on, Zobel gave his platoon leaders and tank commanders a final briefing. Zobel began his attack at 0430 (4:30 A.M.). Visibility was approximately 1000 yards. As they were driving down the road to Village Z, Zobel's lead tanks were taken under fire by Soviet anti-tank gunners, skillfully waiting in ambush. Three German tanks were disabled.

Zobel, realizing that surprise was lost, ordered his elements

to withdraw. He abandoned his original plan of attack, radioed in his failure and awaited the arrival of the main force.

At 0515 (5:15 A.M.) Zobel's units were joined by the task force. Zobel reported in person to the task force commander who immediately drew up a new plan of attack. The plan called for Zobel's company to conduct a feint along the same route of his earlier attack while the task force commander maneuvered the rest of his force to the south, raced a few platoons across to seize the bridges. Once the bridges were secured, the village would be cleared by follow on forces of the task force. The attack was to start at 0600 (6:00 A.M.).

Under the concentrated fire of the task force artillery, tanks of the lead company brushed through light enemy resistance in the south. The lead tank platoons drove through the village, overran several Russian infantry platoons, knocked out two Soviet tanks, and captured the east bridge. All units reported that they had accomplished their missions and the task force commander organized the defense of the village and awaited the arrival of the main body of the 3rd Panzer division. [19]

This example, shows the value the Germans placed on mental agility and quick tactical planning. They saved time by employing a simple and streamlined tactical orders process. Time was understood to be the critical element of war. The term "sufficient planning time" was unknown in the Wehrmacht. Leaders were educated not to expect "sufficient" time to think through each mission given, because in combat there was no way of knowing

what the situation would allow.

> "...To come to rely on some imaginary increment of time as necessary to execute a mission properly would subtly inject a degree of doubt, if that time did not materialize, into the minds of the leaders before the operation ever commenced. That could create dangerous reservations among the leaders and led before battle was joined. The men and unit must simply improvise and conduct the operation to the best of their capabilities under the prevailing conditions." [20]

The Wehrmacht did not require a ten-page operations order at the task force level. In fact, the task force commander gave his orders verbally, and after analyzing his mission for only 20 minutes. This gave his subunit commanders time to prepare and brief their own men. The task force commander gained a time advantage over his enemy by implementing a quick decision cycle.

The key to the plan was surprise. The task force commander, basing his decision on the available aerial reconnaissance information, set the task force in motion early. He developed the intelligence picture continuously throughout his tactical orders process. Both the task force commander and the advance guard commander used the technique of an intelligence update to determine if the situation had changed, prior to the attack. If the intelligence update revealed that the situation had changed, both commanders could have changed the plan accordingly. Had the Germans moved less swiftly, the Russians would surely have detected their move and reacted accordingly.

Most importantly, the tactical thinking was extremely flexible. When Zobel's quick race to the bridges failed, he did not attempt to make the original plan fit the changed circumstances. Reading the situation correctly, he awaited the main body of the task force and reported to his commander. The task force commander then readdressed the situation, acted decisively, and accomplished the mission with minimal casualties. It is interesting to note that the official critique of this action stated that the unit had jeopardized surprise by conducting a refueling operation too close to the enemy and that the task force commander should have gone forward to lead the advance guard in person. Other than that, the "... attack by the fully assembled task force was properly planned and executed with the expected quick success." [21]

Summary

The Wehrmacht's tactical orders process was an important combat multiplier. The Wehrmacht exhibited a consistently short decision cycle and gained a decided time advantage over their opponents. The Wehrmacht tactical orders process was simple, verbal and mission oriented. The process was geared to decisive action. It emphasized the integration of intelligence information and based planning flexibility on the intelligence product.

The Wehrmacht system decentralized command responsibility to well-trained officers, who were expected to act decisively.

The heart of the Wehrmacht tactical orders process was the concept of ***Auftragstaktik*** - mission tactics. The use of mission orders became a habit of thought in the Wehrmacht. The intentions of the two next higher headquarters were routinely provided to all units. The commander provided the who, what, where, and why in very succinct and implicitly understood terms. The details of accomplishing the mission was left to the subordinate.

This system was possible because,in the Wehrmacht, it was normal for superiors to trust their subordinates to do their duty without supervision.

Quality junior leaders, trusted to take decisive action, lead by trained commanders who commanded from the front, turned the Wehrmacht into a remarkable tactical fighting machine. The Wehrmacht's tactical orders process was a victory of intent.

End Notes Chapter 4

[1] Martin van Crevald, Fighting Power, German and U.S. Army Performance, 1939-1945, (Westport, Connecticut: Greenwood Press, 1982), p. 29 and p. 32.

[2] Colonel (U.S.A. Ret) T. N. Dupuy, A Genius for War, The German Army and General Staff, (Englewood Cliffs, N.J.: Prentice Hall Inc.,1977), p. 7.

[3] Crevald, p. 4.

[4] Ibid., p. 4.

[5] Ibid., p. 5.

[6] Bryan Perrett, Knights of the Black Cross, (New York: St. Martin's Press, 1986), p. xiii.

[7] Center for Army Tactics, Truppenfuhrung (1933) (Fort Leavenworth, Kansas: U.S. Army Command and General Staff College, 30 January 1989. 1989 transcript of 1936 translation of Truppenfuhrung [1933]), pp. 5-13.

[8] Major General J.F.C. Fuller, A Military History of the Western World, Volume 3, From the Seven Days Battle, 1862 to the Battle of Leyte Gulf, 1944, (New York: Minerva Press, 1967), pp. 409 -410.

[9] Generalfeldmarschall Albert Kesselring, Manual for Command and Combat Employment of Smaller Units (Based on German Experience in World War II), (originally prepared by the Chief Historian, Headquarters European Command United States Army, on 17 July 1952), p. 18.

10 Ibid., p. 13.

[11] Ibid., pp. 18 - 29.

[12] Ibid., p. 12.

[13] Ibid., pp. 13 - 14.

[14] Ibid., p. 26.

[15] Ibid., p. 26. **Page 26 of "Manual" highlights this point:**

"If the one who is to carry out the order is a factor in a plan strictly organized as to time, place and procedure, the order must itself be strictly organized and must contain all necessary details. This form of order is also necessary if the subordinates are insufficiently trained. If, however, the commander believes his subordinates are capable of completing a mission themselves, because they have the necessary training, experience and fighting qualities, he will content himself with stating the purpose and objective of his order. Further details of the execution can be limited to the elements absolutely necessary for coordinating activities of adjacent, supporting or supported troops with respect to time and place. This last mentioned form of giving orders, the assignment of a mission, with latitude being given as to the execution, will induce all commanders and combatants to think. It will increase their self-confidence and their sense of responsibility and, in case of a sudden change in the situation, it will insure that the spearheads act according to the intentions of the commander. On the other hand, forces accustomed to waiting for an order, or who need an order for each action, will simply freeze to the point of inaction unless they receive such an order." p. 26.

[16] Richard F. Timmons, "Lessons From the Past for NATO," The Parameters of War, Military History Journal of the U.S. Army War College., vol xiv no 3, (Washington: Pergamon - Brassey's International Defense Publishers, 1987), p. 272.

[17] Battelle Columbus Laboratories, interview by Generalmajor F. W. von Mellenthin, Armored Warfare in World War II, Conference Featuring F.W. von Mellenthin German Army May 10 1979, (Columbus, Ohio: Battelle Columbus Laboratories, 1979), p 47.

[18] Department of the Army Pamphlet, Small Unit Actions during the German Campaign in Russia No. 20-269, (Washington D.C: Government Printing Office, July 1953), p. 118.

[19] Ibid., pp. 118 - 125.

[20] Timmons, p. 277.

[21] Ibid., p. 125.

Chapter 5

The Soviet Approach

The most important requirement placed on the decision is for scientific soundness, i.e., its applicability to the existing and expected situation, the assigned mission, the senior commander's concept of the battle, and the laws and principles for conducting combat operations as established in regulations. Only in this case can the decision be a reliable basis for command and control. [1]

There is little doubt that Soviets put primary emphasis on their military. In fact, the Soviet Union has often been called a Third World nation with a First World military. The Soviet tactical orders process, likewise, has received unprecedented attention and study. The product of a rigidly structured and bureaucratic society, the tactical orders process of the Soviet Army has been developed to meet the peculiar needs of a huge conscript force composed of many different nationalities. It is steeped in Russian military tradition, the lessons learned from the wars with Germany, and the demands of Marxism-Leninism. Its scientific approach to combat is the result of these forces and a tremendous amount of study and experimentation.

In the 1920's and 1930's the Red Army was on the forefront of mechanization. Strongly influenced and closely linked to the development of the German armored force, the Soviets forged a modern army led by a dedicated and professional officer Corps. The leader of the Red Army of this time, Marshal of the Soviet Union Mikhail N. Tukhachevskiy, attended staff courses in Germany in the 1920's. Tukhachevskiy had a very distinguished career in the Red Army: Chief of Staff of the Red Army from 1925 to 1928, Commander of the Leningrad Military District 1928-1931, Chief of Armaments 1931-1934, Deputy Commissar of Defense 1934-1936, and First Deputy, Chief of Combat Training from 1936-1937. He was described by J. F. C. Fuller as a "remarkable general ... a barbarian who abhorred western civilization ...[and] had the soul of Genghis Khan ... Autocratic, superstitious, romantic, and ruthless, he loved the open plain lands and the thud of a thousand hoofs...." [2] Tukhachevskiy became the Soviet proponent for mobility and maneuver warfare. He proposed highly mobile combined arms forces, conducting deep offensive operations, concentrating forces at the decisive point.

Tukhachevskiy determined the need to develop an all-encompassing science of war to control modern mechanized forces. Gathering the best and most talented officers to this endeavor, Tukhachevskiy laid a solid foundation for the growing Red Army. His Field Service Regulations of 1936 rejected "orders-intensive" tactics, so typical of previous Russian practice, and embraced maneuver warfare. In these Regulations he stressed

the flexibility, speed and depth required for victory on the modern battlefield. "According to Tukhachevskiy, the new regulations are of enormous importance, one which defines the methods of combat training in the Red Army and reflects the definite system of views concerning the nature of modern battle." [3]

Stalin's purges in 1937 changed all that. The Red Army's nervous system, the trained military leadership that was the future of the Red Army, was decimated. "During these purges, the Soviet military lost a larger proportion of top leaders than were later lost through German action in all the years of World War II." [4] Tukhachevskiy was executed, and the thinking, independent-minded, energetic officers that were associated with him were killed or imprisoned. The lesson of these purges, burned into the collective psyche of the Red Army's leadership, was that survival depended on unflinching obedience and strict adherence to regulations and the party line. The 1936 regulations were never fully implemented and the Red Army returned to the order-intensive methods of the past.

With this background, it is not difficult to understand the defeats suffered by Russian arms in Finland in 1939 and at the hands of the Wehrmacht in 1941 and 1942. On 22 June 1941, Germany invaded the Soviet Union and caught the Russians completely unprepared. At the tactical level of the Red Army, rigid, strict adherence to orders was expected and demanded. In an atmosphere of surprise, confusion and mistrust, the Red Army seemed paralyzed in front of the Wehrmacht's Panzer Armies.

> "The lower command echelons (echelons below division level) of the Russian Army, and for the most part also the intermediate echelons (generally division level), remained for a long period inflexible and indecisive, avoiding all personal responsibility. The rigid pattern of training and a too strict discipline so narrowly confined the lower command within a framework of existing regulations that the result was lethargy. Spirited application to a task, born of the decision of an individual, was a rarity. Russian elements that had broken through German lines could remain for days behind the front without recognizing their favorable position and taking advantage of it. The Russian small unit commander's fear of doing something wrong and being called to account for it was greater than the urge to take advantage of a situation." [5]

With the destruction of one field army after another, the Red Army was desperately short of trained, competent leaders. Without trained leadership, the techniques of the tactical orders process were poorly understood and executed at the tactical level. Blind obedience to the letter of the order was the norm. Failure at the front was followed by dismissal, execution or assignment to one of the suicidal penal battalions.

Bravery and the dogged determination of the Russian soldier allowed the Soviet Union to survive long enough to grow a new generation of combat leaders. These leaders learned the lessons of modern war the hard way, at great cost in human life, in combat. Fighting the Wehrmacht from 1941 to 1945, the Red Army learned the tactical and operational lessons of modern warfare in

a manner and scale that is difficult for Westerners to comprehend.

By May 1945, the situation between Germany and Russia was completely reversed. The powerful Red Army of the Soviet Union stood supreme before a defeated and destroyed Germany. Four long years of war had seen the Red Army rise from humiliating defeat at the hands of the German Panzer Armies to the creation of a highly mechanized and extremely confident modern army that was virtually unstoppable. The techniques used to command and control this vast mechanized force, paid for with so much blood, would be the blueprint for future generations of Soviet officers.

Soviet Doctrine and the Orders Process

Soviet doctrine stresses in-depth reconnaissance, overwhelming firepower at the point of decision, and armored breakthrough at sufficient tempo to quickly seize operational objectives and end the war quickly. Plans are based upon intelligence and great emphasis is placed on proper reconnaissance. Detailed comprehensive fire plans are employed to destroy enemy forces to make operational maneuver possible. The Soviets plan the battle to take advantage of the information gained by reconnaissance, and will quickly switch forces along an operational direction that shows success. "Soviet tactics are of the utmost simplicity; they can be condensed into a single phrase - the maximum concentration of forces in the decisive sector." [6]

Soviet doctrine approaches maneuver warfare from the

detailed - orders tactics approach. The ideal form of combat is expressed by the following statement: "Highly mobile combat operations, often conducted on independent axes in the absence of a solid front, enable a commander to make extensive use of various types of maneuver." [7] Rejecting the attrition style of war the Soviets see a great opportunity to beat their opponents through maneuver that is 'broken free' of the front lines by overwhelming firepower. "This makes it possible to avoid successive 'gnawing away' of each enemy position, quickly use the results of nuclear and fire strikes, shift efforts to the depth of the enemy's position, and develop the offensive to a high tempo." [8] The power of the forces accelerating through the break in the enemy lines is magnified many times beyond its actual size. " Breaking out into the enemy's rear or flank by even a reinforced platoon will decrease considerably the stability of defenses of his subunits, introduce confusion in his ranks, and disrupt tactical control." [9]

All of this presupposes an effective, centralized, uninterrupted troop control process. "Soviet military doctrine is not just a set of tactical regulations (as it is often misrepresented in the West). It is an all embracing military philosophy which is applied to the whole military system as the military element of Marxist - Leninist Doctrine." [10] The main object is to avoid any situation which would lead to a loss of effective control. In short the Soviets will give up tactical battlefield decentralization in order to maintain operational and tactical tempo. The Soviet manual The Motorized Rifle (Tank)

Battalion in Combat (1987) states that; "Loss of command and control in modern combat, even for a short time, is totally impermissible..."[11]

Tactics (*Taktika*, 1987), is the primary document that outlines Soviet tactical doctrine. Tactics acts as a capstone manual similar to the U.S. Army's FM 100-5, "examines the tactics of modern combined arms battle, and its place and role in military art." [12]

In addition, the Soviet Army has produced detailed manuals that explain the methods of combat for each appropriate level of command. For the purposes of this study, Tactics (1987) and the Motorized Rifle (Tank) Battalion in Combat (*Motostrelkovyy [Tankovyy] Batalyon V Boyu*, 7 April 1986) will be used to illuminate the Soviet tactical orders process as it is prescribed in doctrine.

Chapter Two of Tactics is titled the "Command and Control of Troops." This chapter emphasizes the advantages gained over the enemy by the side that possesses quality command and control. It states that command and control must be "firm and continuous." [13] This is achieved through a constant knowledge of the situation, prediction of significant changes, prompt adoption of a combat plan, meticulous preparation for the plan's execution, positive control and uninterrupted communications.

Tactics establishes the plan as the basis of command and control. The plan must clearly establish the goal of the mission and how to attain the goal. The plan must be "scientifically

substantiated"[14] before it can be adopted. The chapter stresses that the "scientific command and control of the troops requires firm military theoretical knowledge [and] a high level of the art of leading troops in the complex conditions of modern warfare." [15]

Time is recognized as the common factor of combat. Compressed time for planning is viewed as the normal condition of modern combat. "Today all measures aimed at organizing battle and leading troops in the course of it, must be carried out in minimal time, so that the troops in operations can anticipate the enemy." [16] Time is gained in combat by the "swift reaction to changes...and to timely updating (when necessary) of a previously adopted battle plan....." [17]

The basic principles of troop command involve; 1) one-man command, 2) personal responsibility of commanders, 3) centralized command and control, 4) initiative of subordinates, 5) constant knowledge and in depth analyses of the situation, 6) prediction of the development of events, 7) firmness and persistence in implementing decisions and plans, 8) a high degree of organization and creativity and 9) a knowledge of the personnel and reliance upon subordinates.

The Soviet commander follows a structured decision-making process geared to the type of mission that he is conducting. First he gathers and processes all the available information regarding the situation. He then makes or refines the decision and begins to plan combat operations. He then completes his order and transmits the combat missions to the units. Next he organizes and directs

the support of combat operation, organizes and carries out political work among the troops, and prepares the troops for combat. He then maintains constant control during the execution of the mission and monitors troop readiness.

Soviet Operations Orders

According to Tactics, the commander's ability to develop a battle plan with a correct solution is the critical element of Troop Control. The "correct' plan, or a variant of the plan, must be strictly adhered to. Tactics goes on to say:

> "The tactical art of a commander manifests itself in his adoption of an offensive battle plan which ensures correct selection of the direction of the main strike and of the means of routing the enemy, achieving surprise in the attack, dependably suppressing the enemy's fire weapons with fire, maintaining continual superiority over the enemy in the decisive sector, maneuvering fire and resources flexibly and competently, forestalling the enemy in augmenting the effort, and dividing, surrounding and annihilating his forces in detail. An original concept or a bold maneuver unexpected by the enemy can double or triple the power of the weapons and the combat capabilities of the subunits, while mistakes and stereotypical tactics can neutralize the efforts of many people. Under all circumstances the battle plan that is adopted must be thoroughly justified."[18]

Tactics gives specific guidance on how operations orders are to be issued. Combat missions are assigned to subordinates by

combat warning instructions, operations orders (***boyevymi prikazami***), and combat instructions (***boyevymi rasporyazheniyami***).

Combat warning instructions are preliminary fragmentary orders that warn subordinate units of upcoming missions and start their parallel planning process. They authorize the commander of the subordinate unit to begin action in preparation for the upcoming mission. Soviet combat warning instructions appear to contain more detailed information then the Warning Orders used by the U.S. Army. The information contained in Soviet combat warning instructions include information on the enemy; the frontage for offense or defense and the axes of concentration of the main effort; the line for going over to the attack; the line of the combat mission and the direction of further advance; adjacent units, lines of their combat missions and their direction of advance; time of readiness; battle preparation tasks; and the method of disseminating the operations order. [19]

"The operations order contains the basic information from the commander's battle plan required by the subordinate commander to organize combat." [20] The operation order includes the minimum essential information necessary for the commander to organize his operations according to the senior commander's plan. The operations order starts with the words "I order." The details of the order include the combat missions of the maneuver units and combat support units, "the consumption of ammunition and fuel for carrying out the combat mission, places of deployment and

directions of relocating technical support and rear services subunits; the time of readiness for carrying out the combat mission; and the location of the commander's observation post and deputies." [21]

A typical operations order for a battalion, as described in Tactics, has seven paragraphs: 1) missions, order of the conduct of the attack, route of advance, attack line, and critical times to units of the first echelon; 2) missions, order of the conduct of the attack, route of advance, attack line, and critical times to units of the second echelon; 3) missions for attached artillery subunits, 4) missions for other combat support units (grenade launcher platoon for example), order of the conduct of the attack, route of advance, attack line, and critical times; 5) missions for additional combat support units (antitank platoon for example); 6) missions for subunits (engineers etc.) remaining directly subordinate to the battalion commander; and 7) the times to be met to fulfill the missions, expenditure rates of ammunition by type and the location of command posts. Each subunit mission includes detailed information concerning fields of fire, frontages and the order for opening and conducting fires. The battalion commander issues his directives concerning reconnaissance and comprehensive combat support after he clarifies the combat missions of his subunits.

Combat instructions (***boyevymi rasporyazheniyami***) are the commander's means to update previously assigned orders. Variants of the original plan are implemented in this way. These fragmentary orders vary in format depending on the situation.

They are a normal, and expected, method of updating the plan based upon new intelligence information or changing enemy situations.

Orders are transmitted by written operation order or combat instruction whenever possible. The use of pre-formatted operation order forms is encouraged. "Formal documents taking the form of preprinted standard forms such as questionnaires or tables in which the needed information reflecting the battle plan is entered are widely employed today as a means of transmitting combat missions." [22] As a rule, orders are issued orally, by the commander in the field, overlooking the terrain if possible. "In units and formations, the principal means of assigning combat missions is to have the commander or other officials acting under his instructions orally transmit the operation and combat instructions with reference to the terrain itself or a map. This would require a visit directly to the subunits and units." [23]

Graphic methods are stressed over the written word as much as possible. Modern means of issuing operations orders and combat instructions are emphasized. Computers, video displays, fax machines and photo copiers are seen as vital technology that is a requirement for effective Troop Control. Any technique that gains a time advantage is encouraged. "But in practice the Soviets' extremely advanced C3I systems have almost certainly deprived the mobile force commander of his previous freedom of action and resulted in a kind of "forward command from the rear". In effect, an army commander can now directly control a company group without moving from his headquarters; and it would be very

un-Russian of him to resist doing just that." [24]

Tactical Example

A perfect example of what the Soviets **want** to have happen in the application of tactical orders process is presented in the manual ***Motostrelkovyy (Tankovyy) Batalyon V Boyu,*** the Motorized Rifle (Tank) Battalion in Combat, 1986. This manual describes the "correct" decisions and the prescribed times required to make those decisions. The Motorized Rifle (Tank) Battalion in Combat manual consists of five chapters as follows: 1) Fundamentals of Combined Arms Operations; 2) The Offensive (including detailed information of the U.S. and German armies are organized and how they intend to fight); 3) The Meeting Engagement; 4) The Defensive and; 5) Movement. Chapters 2 through 5 each contain textbook examples of how to conduct these operations.

The example for this analysis, from ***Motostrelkovyy (Tankovyy) Batalyon V Boyu,*** is titled: Work of Tank Battalion Commander and Staff in the Preparation of an Attack on a Defending Enemy from the March out of a Forming Up Area and Control of Subunits in Battle (Variant). The reader is cautioned that this scenario is the Soviet Army's view of an ideal battalion offensive operation. As the ideal, it establishes the goal that all Soviet battalion commanders are expected to achieve. The following example is paraphrased from the manual.

The situation presented is a Soviet tactical level attack that has been temporarily halted by the enemy. The enemy is defending in prepared positions. Soviet attempts to break through the defenses "from the march" were unsuccessful. The 1st Company, 28th Motorized Rifle Regiment, has gone over to the defensive opposite the enemy positions.

The 1st Battalion, 18th Tank Regiment, which was executing a night march in column with the regiment's main forces, is ordered to concentrate in a forest "forming up place" (assembly area) by 0500 (5:00 A.M.), 6 July. At the halt the battalion commander issues the following instructions:

1) The battalion is to move to the forest "forming up place" and camouflage, establish air and chemical/radiation observation posts and set up field defenses. Camp fires and cutting down trees are forbidden.

Each company is to establish one platoon ready to fire antiaircraft machine guns against air targets.

2) After setting up security and camouflaging, "level one" technical maintenance is to be conducted on all vehicles. Breakfast is at 0730 (7:30 A.M.).

3) On the battalions arrival at the "forming up place," the battalion chief of staff is to draw up a diagram of subunit dispositions and submit this diagram to regimental headquarters not later than 0600 (6:00 A.M.) on 6 July.

The battalion arrives in the forest assembly area at 0500 (5:00 A.M.) on 6 July. Personnel immediately begin digging

trenches, pits for tanks, and shelter for motor vehicles. The battalion commander reports to the regimental command post. The regimental commander issues his order to the battalion commander at the regimental headquarters. The regimental order includes the enemy situation, routes and axis of advance (with detailed time schedule), the line and direction of the main strike, the line and direction of the strike of each battalion, and a list of attachments to each battalion. Preparatory fire for the attack is to last 42 minutes. The preparatory fires include nuclear strikes. Aviation is to deliver strikes against enemy reserves. During the preparatory fires, engineer units are to clear passages for the 1st Tank Battalion. Detailed information is issued concerning the location and setting for radios (radio listening silence until the beginning of the preparatory fire for the attack), material supplies, ammunition rates of expenditure and the location of the regimental command post.

The regimental commander finishes his briefing and orders the 1st Tank Battalion commander to brief him between 0750 (7:50 A.M.) and 0820 (8:20 A.M.) hours on his plan. [Considering 5 minutes travel time and only 30 minutes for the regimental commander to issue his plan, it is now 0640. (6:40 A.M.)...The regimental commander expects the battalion plan to be briefed to him in 1 hour and 10 minutes]

The battalion commander immediately begins working on his own plan. He determines the measures which must be carried out first in order to prepare the battalion's subunits to accomplish

the mission in the minimum essential time. He first calculates the use of his available time. Twenty hours remain until the battalion's "readiness time" as stipulated by the regimental commander. The time plan is as follows:

6 July

0700-0710 -- issuing instructions to the chief of staff for preparing the subunits for carrying out the forthcoming mission, for organizing reconnaissance and on the procedure for work on the terrain;

0710-0750 (40 minutes) -- assessing the situation and making the decision;

0750-0820 (30 minutes) - reporting the decision to the regimental commander;

0820-0845 (25 minutes) -- disseminating the decision to deputy battalion commanders and subunit commanders and issuing instructions on all-round combat support, command and control, and political work **[orders group drill]**;

0845-1000 (1 hour 15 minutes) -- travel for ground reconnaissance;

1000-1100 (1 hour) -- participating in work on the terrain conducted by the regimental commander, clarifying the combat mission, and receiving instructions on coordination **[reconnaissance/orders group drill]**;

1100-1300 (2 hours) -- conducting ground reconnaissance with subunit commanders, issuing the operation order, and organizing coordination **[reconnaissance group drill]**;

1330-1430 (1 hour) -- clarifying coordination with the commander of the 2d Battalion, 16th Motorized Rifle Regiment, and the commander of the 6th Motorized Rifle Company;

1430-1630 (1 hour 30 minutes) -- clarifying coordination with the 3d Tank Battalion commander and the 7th Tank Company Commander;

1600-1800 (2 hours) -- clarifying coordination with the 1st Company, 28th Motorized Rifle Regiment, and assisting company commanders in organizing combat on the terrain **[orders group drill]**.

1900 - return to the forming up place.

7 July
0300 -- report to the regimental commander on the battalion's readiness to attack **[orders group drill]**.

0700 -- conduct attack on order of the regimental commander

Work of subunit commanders on the terrain (6 July):
0930-1100 (1 hour 30 minutes) -- ground reconnaissance of the route of advance and deployment lines under the direction of the chief of staff **[reconnaissance group drill]**;

1100-1300 (2 hours) -- participating in work on the terrain conducted by the battalion commander **[reconnaissance group drill]**;

1300-1800 (5 hours) -- conducting ground reconnaissance with platoon and tank commanders, setting combat missions, and organizing coordination **[reconnaissance group drill]**.

The battalion commander makes a decision based upon the

regimental commander's plan. He decides on the number of echelons and then the objectives of each echelon. He determines the densities of forces and, determined the correlation of forces as 3:1 in tanks and 1:2 in infantry for the immediate mission (in favor of the attacker). The attacks are to be conducted from the march. In addition to issuing the order the battalion commander is expected to conduct reconnaissance with his company commanders, platoon leaders and tank commanders and conduct coordination with adjacent and supporting units. [25]

The battle scenario described in ***Motostrelkovyy (Tankovyy) Batalyon V Boyu*** goes according to plan. The fog and friction of war are depicted in the scenario but the Soviet commander successfully fights through these distracters. The enemy inflicts 20 % casualties on the attacking Soviet force, but the battalion secures all objectives. Both sides employ nuclear weapons, but the battalion is not in the burst effect of any explosion. The Soviet commander reaches the moment of truth when it becomes time to deploy the second echelon. True to Soviet practice, he deploys in the zone of the attack in which he is achieving success.

In this scenario, the battalion commander received his attack mission twenty hours prior to execution time. He prepared his decision in an hour and ten minutes and issued his order to the regimental commander. He disseminated the order to his subordinates in an hour and forty minutes after receiving orders from the regimental commander. This left eighteen hours and

twenty minutes to his subordinates to prepare for the attack, more than 9/10ths of the available time. To anyone who has ever issued a tactical operations order, an hour and forty minute orders process time is very good indeed.

The Soviets seriously believe that they can achieve these times through the use of parallel planning, well trained battle drills, the use of decision aids to assist the planner and the simplification of technique. It is important to note, however, that although they are quick to make the decision (1 hour and 40 minutes), the coordination of the attack and the final evolution of the plan takes over one half of the available planning time. Richard Simpkin, intrigued with the same issue, came to the conclusion that the Soviet emphasis on speed and tempo is a bit suspect by western standards. His study revealed that a straightforward battalion attack often took between sixteen and twenty-two hours to plan. He was convinced that the Soviets take much longer to execute the procedures of troop control than some in the West believe. [26]

Summary

The Soviet Army tactical orders process approaches maneuver warfare from the style of detailed orders tactics. The evolution of the Soviet tactical orders process is a product of the history of the Soviet Army and the impact of the "scientific approach" of Marxism-Leninism. The Soviets believe that their system of Troop

Control gives them a marked advantage over their Western opponents.

Troop control is designed to prepare and execute a good plan fast. The Soviet Army's centralized, detailed orders tactics approach places the plan at the center of the control mechanism. To deviate from the plan is unforgivable. If the situation changes, the commander is expected to execute a preplanned variant of the original plan. The system has been reduced to executing drills and driving through the enemy's weak areas with maximum tempo. If the tempo is maintained, the whole system has a better than even chance of working.

The Soviets place great emphasis on control. They do not expect their junior tactical leaders to execute independent command decisions. The Soviets surrender the tactical initiative in their junior leaders for "correctness" of response. They demonstrate initiative, in the Western sense, at the operational and strategic level of war. They expect the tactical level to execute according to plan. "The Soviet Army certainly lacks flexibility as the professional officer corps of the British armed forces or the Bundeswehr understands that term. But when one looks at the comparative rigidity of the U.S. Army with its far less acute problems of integration, one may well conclude that the Soviet Army has the degree of flexibility which suits it best." [27] The Soviet tactical orders process, when it works, is a victory of science, explicit understanding, drill, and calculation.

End Notes Chapter 5

[1] D.A. Ivanov, V.P. Savel'yev, and P.V. Shemanskiy, Fundamentals of Tactical Command and Control, (Moscow: 1977), p. 184.

[2] J.F.C. Fuller, Decisive Battles of the Western World, ed. John Terraine, (London: Granada, 1981), p. 405-406.

[3] Harriet Fast Scott and William F. Scott, The Soviet Art of War, Doctrine, Strategy and Tactics, (Boulder, Colorado: Westview Press, 1982), p. 56.

[4] Harriet Fast Scott and William F. Scott, The Armed Forces of the USSR, (Boulder, Colorado: Westview Press, 1979), p. 18.

[5] Department of the Army Pamphlet, Russian Combat Methods in World War II, (Washington, D.C: Department of the Army, 1950), p. 12.

[6] Victor Suvorov, Inside the Soviet Army, (New York: Berkley Books, 1983), p. 201.

[7] D.A. Dragunskiy et al, ***Motostrelkovyy (Tankovyy) Batalyon V Boyu*** The Motorized Rifle (Tank) Battalion in Combat part 1, (Moscow: 7 Apr 86), p. 5.

[8] Ibid., p. 5.

[9] Ibid., p. 5.

[10] C. N. Donnelly, "The Development of Soviet Military Doctrine," International Defense Review, no 12/1981, (Geneva Switzerland: INTERAVIA S.A.), p. 1589.

[11] Dragunskiy, p. 10. C. N. Donnelly explains the purpose of Soviet doctrine in his article "The Development of Soviet Military Doctrine" found on page 1590, International Defense Review, no 12/1981:

"The effect of this Military Doctrine on the Soviet Armed Forces is often misunderstood in the West. Doctrine is widely viewed as a rigid and restricting set of regulations which destroy initiative and create a stereotyped commander totally unable to think for himself. Many Western armies, in contrast, pride themselves on the ability of their commanders to display initiative and inventiveness, to be versatile, and to introduce their own ideas into their style of command....

The Russians do not see it this way. They deride the British and American reliance in war on what they term scathingly "native wit". This is valuable in its place, say the Russians, but not as a substitute for a well thought out plan. The Soviets consider their Military Doctrine to be one of their greatest assets. It is the concentration and distillation of military wisdom and experience and is constantly being refined, amended and improved by experiment, exercise and reevaluation.

To the Russians, it represents an ideal: the best military philosophy imaginable."

[12] Vasiliy Gerasimovich Reznichenko, Ivan Nikolayevich Vorobyev and Nikolay Fedorovich Miroshnichenko, Taktika [Tactics], translated JPRS 29 June 1988, (Moscow: 1987), p. 1. Hereafter listed as Reznichenko.

[13] Ibid., p. 36.

[14] Ibid., p. 36.

[15] Ibid., p. 36.

[16] Ibid., p. 40.

[17] Ibid., p. 40.

[18] Ibid., p. 89.

[19] Dragunskiy, p. 12. [Unlike the "goose egg" objectives issued by Western commanders, the Soviet Army's "line of combat mission" usually is described as a depth, expressed by a line drawn on a map.]

[20] Reznichenko, p. 51.

[21] Dragunskiy, p. 19.

[22] Reznichenko, p. 52.

[23] Ibid., p. 52.

[24] Richard E. Simpkin, Race to the Swift.Thoughts on 21st Century Warfare, (London: Brassey's Defense Publishers, 1985), p. 43.

[25] Dragunskiy, p.19.

[26] Detailed discussion of the time needed by Soviet commanders to plan and conduct operations is found below:
Richard Simpkin, "Chapter Six, Technology, Threat and Possible NATO Response." in Lieutenant Colonel J.A. English, Major J. Addicott and Major P.J. Kramers, The Mechanized Battlefield. A Tactical Analysis, (Washington: Pergamon - Brassey's International Defense Publishers, 1985), p. 90-91.

"Thus both the advance and the approach march are executed in column. So they do, in fact, deploy for an attack "straight off the line of march." Now I have tried that and I know of Americans and Bundeswehr people who have tried it with their battle groups and combat teams and invariably the result is totally delirious. One is prone to ask why the Soviets are cleverer at it than we? What is less obvious until one goes into it, is that before this impressive display they have gone through a complete sequence of

battle drills -- movement planning, regrouping and movement orders, : "R" (reconnaissance) groups, "O" (orders) groups, etc.

Four or five weeks ago I was studying a series of articles in ***Voennyi Vestnik*** (their Military Herald, a monthly professional journal aimed at junior and middle-piece officers, and perhaps senior NCOs). These articles, from the "all-arms battle" series, were mostly headed something like "the speedy attack," and most singled out a battalion or a regimental headquarters for praise. I was flabbergasted to find times form receipt of mission to H-hour of between sixteen and twenty-two hours for a straightforward battalion attack. At that speed anybody can be dead clever and get their beauty sleep into the bargain. I have not yet unraveled this mystery, but, while I am the last person to decry the opposition, my research has led me to suspect that all the Soviet emphasis on speed and tempo is a shade suspect by German or Israeli standards."

[27] Richard E. Simpkin, Red Armour, (New York: Pergammon-Brassey's International Defense Publishers, 1984), p. 70-71.

Chapter 6

The American Approach

Plans must be simple and flexible. Actually they only form a datum plane from which you build as necessity directs or opportunity offers....The order itself will be short, accompanied by a sketch -- it tells what to do, not how. It is really a memorandum and an assumption of responsibility by the issuing commander. General George S. Patton Jr. [1]

America has practiced the attrition style of warfare in all of her conflicts during the 20th Century. "It is easier to be proficient at attrition warfare, which requires the simplest military skills and enormous quantities of arms and munitions." [2] With remarkable exceptions, such as MacArthur's Pacific strategy in World War II, and his amphibious invasion at Inchon in the Korean War, the United States Army has taught, lived and practiced attrition. Our tactical victories in both World Wars, Korea and Vietnam were due largely to our ability to sustain overwhelming numerical or firepower superiority over our opponents. Courage and leadership notwithstanding, we simply bludgeoned our way to victory through superior firepower. Firepower, however, is not the sole ingredient for victory. In Vietnam, all the superior firepower at our disposal could not win an operational or strategic victory.

The trend set by Vietnam has ominous implications for the United States. A quick assessment of the battlefields where U.S. forces could be committed to future conflicts do not show the force ratios in our favor. In very few future battle scenarios can the United States expect to outnumber or even "out-firepower" potential opponents. Even the armies of third and fourth world nations have an impressive array of lethal modern weapons at their disposal and large standing armies. The total armed forces of North Korea, for example, are larger than the total United States Army! [3] For the United States to win future wars, the doctrine of the United States Army has to change style from attrition to maneuver.

To counter a concentrated, overwhelming, surprise Soviet attack in Europe, U.S. military theorists developed the AirLand Battle doctrine. This doctrine was designed, after the doctrinal void caused by the Vietnam War, as a counter to the modern, fully mechanized Soviet Army. Soviet Army doctrine, heavily rooted in their concept of maneuver as they experienced it during the Second World War, is based upon mass and "tempo." [4]

The reputation of the American Army is one of overwhelming firepower and mass. This philosophy can be traced to three very influential concepts; the institution of a "management philosophy," a historical belief in "attrition," and the tradition of "detailed orders tactics." For a detailed analysis of these factors see Annex C - The Development of the American Tactical Orders Process.

Air Land Battle Doctrine and the Tactical Orders Process

As explained in Chapter 2, AirLand Battle is the tactical and operational doctrine of the United States Army. "The doctrine encourages an offensive spirit in all operations, espouses no standard organization for defense, stresses the use of mission orders and the importance of initiative in small units, and emphasizes the human dimensions of combat." [5]

After a careful study of military history, especially the successes of the Wehrmacht and the Israeli Army, the authors of FM 100-5 were convinced that the United States must adopt maneuver warfare. "The key principles of the AirLand Battle doctrine are: the use of the indirect approach; maintenance of initiative through speed and violence; flexibility and reliance on the initiative of junior leaders; clear definition of objectives, concepts of operations, and the main effort; and attack of the enemy in depth. Wherever possible, the enemy will be defeated by destruction of critical facilities rather than through overall attrition." [6]

Two important constraints guided the development of AirLand Battle doctrine. The first was that "war was fought by people and not by machines. Further, people would behave as people have always behaved throughout the history of battle. This constraint resulted in the important realization that optimizing weapons effectiveness does not always optimize the effectiveness of

soldiers." [7] The second constraint dealt directly with the tactical orders process. To conduct AirLand Battle, the authors of FM 100-5 believed that the United States Army must adopt "mission tactics" to conduct AirLand Battle. They realized that centralized control was impossible on the modern battlefield. "This led to the incorporation of a doctrine of command and control which features decentralization of decisions by the use of mission orders similar to that used by the Wehrmacht early in World War II. This style of leadership is called "Auftragstaktik" by the Germans." [8]

U.S. Army Operations Orders

U.S. Army tactical orders consist of three types of orders; Warning Orders, Operation Orders and Fragmentary Orders. Warning Orders are partial orders that are used to gain time. Warning Orders get your forces moving in the right direction as you continue to develop the plan. FM 101-5-1 Operational Terms and Symbols, October 1985 defines warning order as "a preliminary notice of an action or order that is to follow. Usually issued as a brief oral or written message, it is designed to give subordinates time to make necessary plans and preparations." [16]

Warning Orders allow preparation time for mission preparation. Critical time is wasted if a warning order is not issued as soon as possible. Warning orders should be issued over the quickest available means. Doctrine does not prescribe a specific format for the warning order. Although there is no

prescribed format for warning orders, the warning order contains five minimum essential elements:

Warning Order

1. **The mission.**
2. **Who is participating in the mission.**
3. **Time of the operation.**
4. **Any special instructions.**
5. **Time/place for issue of complete order**

The 5 paragraph operations order is the format for all oral or written orders in the U.S. Army. FM 101-5-1 Operational Terms and Symbols, October 1985, defines the operations order as "a directive issued by a commander to subordinate commanders for effecting the coordinated execution of an operation; includes tactical movement orders." [17] The operations order is the means by which a commander transmits his concept of the operation and his intent concerning the accomplishment of a given mission. The order can be issued orally, using the 5 paragraph as a guide, or can be written, with attached annexes and overlays. It provides a time- tested guide with which to issue military orders. The format for the current Operations Order is shown below:

Operations Order

Task Organization
Paragraph 1: Situation
- **a. Enemy Forces**
- **b. Friendly Forces**

c. Attachments and detachments

Paragraph 2. Mission

A clear, concise statement expressed in the who, what, when, why, and where of the tasks to be accomplished There are no subparagraphs.

Paragraph 3. Execution

a. Concept of the Operation. [The commander's visualization of the operation form the beginning to the end. It must accurately describe the commander's intent so that mission accomplishment is possible in the absence of further instructions.]

(1) Maneuver

(2) Fires

b. Missions for assigned/attached units are stated in separate subparagraphs. Details for each specific unit are discussed.

c. Coordinating instructions [last subparagraph of paragraph 3]

Paragraph 4: Service Support

Contains Combat Service Support instructions, information, and details for support.

Paragraph 5: Command and Signal

a. Command [includes Command Post location, succession of command and liaison]

b. Signal [Communication-electronic instructions]

Task Organization

The first section of the operations order outlines in detail the task organization of the force. The task organization portrays the internal organization of the force. The task organization depicts each unit in a command or support relationship. Each unit is placed in one of four different categories of control; Organic, Assigned, Attached or Operational Control.

An organic unit is assigned a permanent organization and has an

established table of organization and equipment (TOE). Three tank platoons, for example, are organic to a tank company. Assigned units are placed in another unit on a relatively permanent basis. The organization to which they are assigned has complete command and control authority and administrative and logistical responsibility for assigned units. Attached units are a relatively temporary placement, imposed by order, with total authority (except for transfer and promotion) held by the gaining unit. Lastly, Operational Control (OPCON) units are delegated to a commander for a specific mission or task which is usually limited by function, time or location.

The Task organization is listed in alphabetical or numerical sequence in order; combat, combat support, and combat service support. Combat units are listed in order of infantry, mechanized infantry, air assault, airborne, and armor. The specific organization of each major subordinate unit is shown by indenting subordinate units under the command and control headquarters heading.

1. Situation

The situation paragraph describes in detail both the enemy and friendly situations. The enemy situation is explained by the intelligence officer as outlined in the S2/G2's Intelligence Preparation of the Battlefield Process (IPB). In the Friendly Forces section of Paragraph 1, the mission of the units on the flanks, to the front (if any), any supporting or reinforcing units, and the mission of the next higher headquarters is explained. Attachments/Detachments that are new to the task organization are

introduced so that their command relationships are understood by all the subordinate commanders.

2. Mission

The mission is a clear statement of what the unit is to accomplish. It consists of the who, what, when where and why of the tasks to be accomplished. There are no sub paragraphs of the mission statement.

3. Execution

The execution paragraph contains the "how to" information needed to conduct the operation. This paragraph consists of three or more subparagraphs: 3.a. Concept of the Operation, 3.b. subordinate unit instructions, and 3.c coordinating instructions.

Paragraph 3.a. is the concept of the operation. The concept of the operation is the commander's visualization of how the operation will be conducted from beginning to end, to include fire support and the employment of other combat multipliers. The summary of the scheme of maneuver and fire support plans are covered in detail in this paragraph.

Subordinate Unit Paragraphs list the specific missions of each subunit. At Battalion level, all units that appear in the task organization will be included in Subordinate Unit Instructions with the exception of the combat service support elements which are addressed in paragraph 4.

Coordinating instructions are the last subparagraph of the Execution paragraph of the operations order. These instructions contain coordination and control data for two or more units. Most items in coordinating

instructions can be covered in unit Standing Operating Procedures.

4. Service Support

This paragraph contains all the information necessary for subordinate units to coordinate their resupply, recovery of equipment and evacuation of wounded and prisoners. The service support paragraph should be supported with a matrix or overlay that specifies exact location of logistical rally points and supply routes. As with the concept of the operation, alternate plans should be prepared to support the force in case the basic plan is changed by events.

5. Command and Signal

The final paragraph of the operations order is divided into two parts. Subparagraph 5.a. lists the Command CP location, the location of the commander before and during the battle and his proposed location after the battle. The order for assumption of command must be clearly understood and should be specified if it is not a working part of the unit's SOP.

Subparagraph 5.b. specifies the signal instructions for the unit. Designated alternate or "jump" frequencies should be established in this paragraph if they are not already established by SOP. As a minimum the CEOI (Communications Electronic Operating Instructions) index number must be specified so that everyone will be on the proper frequencies.

Fragmentary Orders are orders that are given after the issue of the operation order. FM 101-5-1 Operational Terms and Symbols, October 1985, defines Fragmentary orders as "an abbreviated form of an operation

order used to make changes in missions to units and to inform them of changes in the tactical situation."[18] These orders are used to take advantage of battlefield opportunities or to adapt to enemy actions. Fragmentary orders have no format. The essential items of a fragmentary order, or FRAGO as they are called, are: the enemy and friendly situation; changes to the task organization; orders to subordinate units; fire support; and changes to coordinating instructions. FRAGOs are almost always verbal; issued over the radio or face to face. The commander completes the tactical orders process by issuing fragmentary orders to supervise the accomplishment of his mission.

Tactical Example

The United State Army established the National Training Center (NTC) in the early 1980's for the purpose of training heavy battalion task forces in realistic combined arms training. The training at Fort Irwin incorporates both live-fire and free play force-on-force operations. A dedicated and highly professional opposing force, or OPFOR, employs Soviet tactics against the battalion task forces conducting their rotation at the NTC.

The NTC also serves an additional purpose as a proving grounds for doctrine, tactics, techniques, procedures and equipment. Almost every day, twelve months a year, battalion task forces are conducting realistic and demanding tactical training in the harsh desert playing fields of the NTC. The information gathered from these exercises is analyzed and recorded by a competent group of tactical experts called "observer/controllers." The following tactical example of the U.S. Army

tactical orders process was taken from Major Daniel P. Bolger's excellent book on operations at the National Training Center titled Dragons at War. This book follows the tactical actions of a heavy battalion task force in October 1982.

The task force had been in the desert, fighting the OPFOR for the past ten days. They had lost some previous battles and were eager for a "win." The task force's new mission was a movement to contact, an operation requiring the task force to find the enemy in their zone, fix, and destroy him The mission was received by the battalion commander at 150900 October 1982 (09:00 A.M. ,15 October 1982). The instructions from Brigade were vague; attack at 160630 October 1982 to "locate and, if possible, destroy the enemy in zone." [19] The brigade order contained no clear information on enemy locations or activities. The battalion command group (consisting of the battalion commander, S2 [intelligence officer], and S3 [operations officer]) immediately sent out a warning order and began planning for the movement to contact.

Without accurate intelligence on the enemy, the battalion command group based their immediate attention on the terrain. They assumed a Soviet regiment could operate in this terrain against them and constructed their plan with this enemy force in mind. The plan was determined for the worst case contingency. No alternate or contingency plans were made. The commander, S2 and S3 derived the scheme of maneuver from an informal wargaming process that did not follow any of the decision-making strategies found in doctrine. The task organization of the task force was changed slightly to meet the assumed threat of fighting a Soviet motorized rifle regiment in a "head on head" engagement.

The total time allotted from receipt of the mission to the crossing of the start point was 21 hours and 30 minutes. Using the standard U.S. Army rule of reserving 2/3s of the available time for subordinate units to plan their operations (the 1/3s - 2/3s Rule), the battalion should have issued the operations order not later than 151630 October 1982 (4:30 P.M., 15 October 1982). The Task Force issued their operations order to subordinate leaders at 151845 October 1982 (6:45 PM, 15 October 1982). The order was completed in one hour and twenty minutes. At the end of the task force operations order the company commander's and subordinate leaders had only ten hours and thirty minutes remaining with which to create their own operations orders, brief, and rehearse their units. In addition, **the available time remaining was all during the hours of darkness.** The first time that the subordinate leaders would see the terrain in the daylight would be at the hour of attack.

The lack of speed in conducting the tactical orders process had a damaging impact on the early morning attack. Pressed to the limit to prepare for the offensive action, very few leaders got any precious sleep. The cumulative effect of a slow orders process tired the leadership and robbed them of valuable rest time. Oversleeping the "stand to" time, the lead company team missed the line of departure.

The task force commander immediately had to issue a fragmentary order to change the order of movement across the line of departure. At the same time the task force scout platoon reported seeing dust clouds in the direction of the enemy. The Soviet Motorized Rifle Regiment was on its way.

By 160715 October 1982 the battle was fully underway. With only one

effective company team in action against the entire Motorized Rifle Regiment, the situation should have gone to the OPFOR. Luckily, however, the one effective company team occupied a position on decisive terrain and forced the enemy attack to a halt. The battalion commander and the S3 were killed by enemy tanks at 161025 October 1982. The commander of the single company fighting effectively, took charge of the battalion. His efforts were eventually joined by the other company commanders. The successful initiative of one company team commander, who understood the battalion commanders intent, brought victory from the jaws of defeat and saved the remainder of the U.S. task force. The Soviets eventually ground to a halt. By 151100 the OPFOR had been defeated. [20]

The task force had won, but it was a Pyrrhic victory. Total losses were 9 out of 11 tanks, 7 out of 14 APC mounted TOW Antitank vehicles, and 11 out of 36 APCs (Armored Personnel Carriers) to enemy action. The task force was reduced to approximately 65 % strength. Many of the casualties could be directly related to the lack of time that was available to subordinate leaders for reconnaissance, planning, rehearsal, preparation, maintenance, and rest. A better tactical orders process could have gained the valuable time advantage needed to make these tasks possible.

Summary

The United States Army has historically conducted attrition warfare employing detailed orders tactics. The U.S. Army Tactical Orders Process has been typified by detailed orders that attempt to foresee every eventuality and plan for every contingency. This traditional process has facilitated the employment of firepower but does not support the demands

of maneuver warfare.

"The conditions of combat on the next battlefield will be unforgiving of errors and will demand great skill, imagination, and flexibility of leaders."[21] To meet this challenge, the United States Army has adopted the concept of "AirLand Battle" as the maneuver oriented answer to defeat a Soviet doctrine based on mass and tempo. The AirLand Battle doctrine presented in FM 100-5 "...seeks to develop the full potential of the Army....The principles of AirLand Battle doctrine reflect past usages in the U.S. Army and the tested ideas of past and modern theorists of war." [22] This doctrine represents an approach to warfighting that is based on gaining and maintaining the initiative to aggressively defeat the enemy. In short, FM 100-5 "presents a stable body of operational and tactical principles rooted in actual military experience and capable of providing a long-term foundation for the development of more transitory tactics, techniques, and procedures." [23]

The United States Army adopted Airland Battle, however, without changing the traditional attrition-based detailed orders tactics techniques for preparing and issuing orders. The application of detailed orders tactics does not meet the requirements of AirLand Battle. The authors of AirLand Battle emphasized the need to adopt mission tactics to support the commander's ability to command and control. The failure to specify the planning techniques of mission tactics has caused problems in execution at the tactical level, as demonstrated at the National Training Center, Fort Irwin, California.

To conduct Airland Battle the U.S. Army's tactical orders process needs to change to meet the requirements of maneuver warfare. Decision cycles

have to be shortened in order to gain a time advantage over the enemy. Time has to be considered and planned for at every level. The commander's intent needs to be infused into the operations order format and clearly defined. Mission type orders should be employed and responsibility must be decentralized and the tactical orders process must adopt the techniques necessary to employ mission tactics.

"Sound tactics win battles and engagements..." [24] Sound tactics begin with effective and timely tactical planning. What is the best approach to prepare combat orders for AirLand Battle operations? How can the U.S. Army tactical orders process meet the demands of the AirLand Battlefield? The next chapter investigates techniques that are designed to address these questions.

End Notes Chapter 6

[1] General George S. Patton, War As I Knew It, (New York: Bantam Books, January 1980), p 374.

[2] James F. Dunnigan, How to Make War, A Comprehensive Guide to Modern Warfare, (New York: William Morrow and Company, 1982), p. 410.

[3] Francois Heisbourg, The Military Balance 1988-89, (London: International Institute for Strategic Studies, 1988), p. 18 and 167.

[4] John Hemsley, Soviet Troop Control, the Role of Command Technology in the Soviet Military System, (New York: Pergamon Press Inc., 1982), p. 3?

[5] Lieutenant Colonel L. D. Holder, "Doctrinal Development, 1975 - 85," Military Review, (Fort Leavenworth, Kansas: May 1985), p. 52.

[6] Col Huba Wass de Czege, "AirLand Battle Doctrine," Art of War Colloquium, The US Army's Doctrinal Reforms, (US Army War College, June 1983), p. 8.

[7] Ibid., p. 38.

[8] Ibid., p. 39.

[9] Major Paul H. Herbert, Deciding What Has to be Done: General William E. Depuy and the 1976 Edition of FM 100-5, Operations: Leavenworth Paper no. 16, (Fort Leavenworth, Kansas: Combat Studies Institute, 1988), p. 9.

[10] U. S. Department of the Army, FM 100-5 Operations, (Washington, D.C: U.S. Government Printing Office, 5 May, 1986), pp. 15-17. Hereafter listed as FM 100-5.

[11] Ibid., p 12.

[12] Ibid., p 14.

[13] Ibid., p 15.

[14] Ibid., p. 13.

[15] Ibid., p. 15.

[16] U. S. Department of the Army, FM 101-5 Staff Organization and Operations, (Washington, D.C: U.S. Government Printing Office, 25 May, 1984), p. 1-75. Hereafter listed as FM 101-5-1.

[17] Ibid., p. 1-53.

[18] Ibid., p. 1-34.

[19] Dan P. Bolger, Dragons at War, 2-34th Infantry in the Mojave, (Novato California: Presidio Press, 1986), p. 234 - 235.

[20] Bolger, paraphrased from p. 232 - 251.

[21] FM 100-5, p. 5.

[22] Ibid., p. 6.

[23] Ibid., p. 1.

[24] Ibid., p. 11.

Chapter 7

An AirLand Battle Tactical Orders Process

The doctrine presented [in FM 100-5] seeks to develop the full potential of the Army...The principles of AirLand Battle doctrine reflect past usages in the U.S. Army and the tested ideas of past and modern theorists of war. [1]

Usually, the more effective the plan, the less synchronization will be hostage to active command and control once operations begin. [2]

An AirLand Battle approach to the tactical orders process must incorporate the planning factors described in Fm 100-5 Operations. These planning factors will be useful in the development of a tactical orders process model for AirLand Battle. The factors of each AirLand Battle tenet are defined below:

Initiative

1. Set the Terms of Battle
2. Take Prudent Risks
3. Decentralize Authority
4. Aid in Understanding the Commander's Intent

Agility

1. Read the Battlefield
2. Decide Quickly
3. Act without hesitation

4. Mental Flexibility

Depth

1. Necessary Time to Plan
2. Extend Operations in Time
3. Upset the Enemy Plan
4. Degrade Enemy Freedom of Action

Synchronization

1. Arrangement of the Battlefield in Time, Space and Purpose
2. Visualize the Battle
3. Implicit Coordination
4. Anticipation and Unity of Purpose

The Orders Continuum

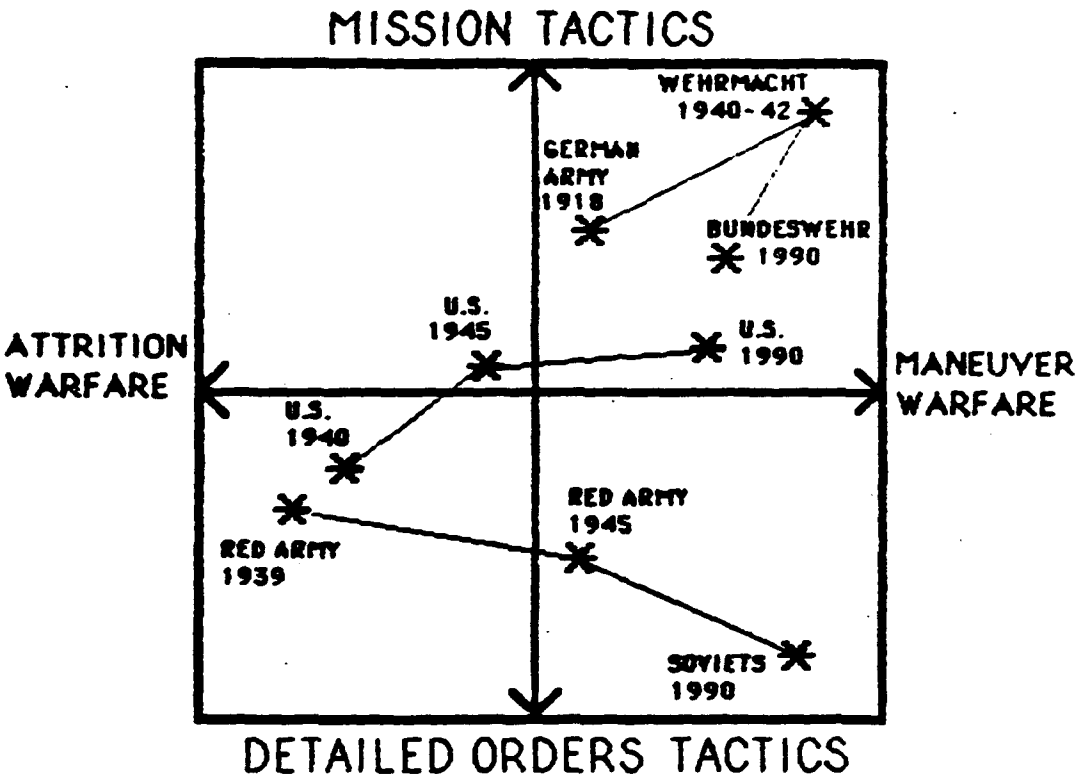
The analysis of the Wehrmacht, the Soviet Army, and the United States Army clearly defines the warfighting styles of each army. Both the Wehrmacht's and the Soviet Army's doctrinal goals were to embrace a warfighting strategy based upon maneuver. To accomplish this these armies approached maneuver warfare from opposite sides of the Orders Continuum spectrum.

Adopting a particular war style has important implications. It sets one's capabilities. The Wehrmacht adopted "mission tactics" and earned an impressive reputation at executing

maneuver warfare at the tactical level. Their successors, the German Bundeswehr, have followed in this tradition. The Soviets, on the other hand, have adopted a "detailed orders tactics" approach to execute maneuver warfare. The United States Army has historically embraced the attrition style of warfighting, but has recently adopted "AirLand Battle," the maneuver oriented war fighting style proposed by Field manual 100-5, Operations. The relative placement of each of these armies is shown in Figure 7-1.

The historical review of the tactical orders process of the Wehrmacht and the Soviet Army reveals several important connections with the doctrine of AirLand Battle. These connections impact significantly on how the tactical orders process for the United Stats Army should be executed. First, both the Wehrmacht and the Soviet systems placed a high degree of emphasis on standardization and simplicity. Second, both systems were adapted to the peculiarities of their own doctrine. And, third, both systems systems were keenly aware of the criticality of time.

ORDERS CONTINUUM



REASONS FOR SHIFTS IN THE CONTINUUM:

	1ST SHIFT	2ND SHIFT
GERMAN ARMY	TRAINED LEADERSHIP FORWARD COMMAND TECHNIQUE INSTITUTIONALIZATION OF MISSION TACTICS & MANEUVER WARFARE	BUNDESWEHR MAINTAINS MISSON TACTICS FOCUS BUT EMBRACES NATO FORWARD DEFENSE. NO GENERAL STAFF.
SOVIET ARMY	LEADERSHIP TRAINED BY WWII SOVIETS DEVELOP TROOP CONTROL	BETTER TRAINING OF HIGH LEVEL TACTICAL & OPERATIONAL CDRs COMPUTERIZATION OF TROOP CONTROL
U.S. ARMY	LEADERSHIP TRAINED BY WWII	U.S. ARMY ADOPTS AIRLAND BATTLE DOCTRINE AND MANEUVER WARFARE

FIGURE 7-1

Standardization and Simplicity

Standardization and simplicity were the key ingredient of the Wehrmacht's tactical orders process. Although the Wehrmacht did not develop a rigid series of standard procedures or formats, a common, almost unspoken, understanding as to what was required was developed in the officer corps. This development was the result of the standardization of the **education** of the German officer corps provided by the institution of General Staff. The Wehrmacht's tactical orders process derived its advantages from the quality of the officer corps. This understanding allowed the translation of the commander's intent implicitly, without the need for elaborate explanation.

The Soviet Army, in a different fashion, created standardization and relative simplicity by **training** their officer corps. The Soviet troop control provides a strict standardization of the requirements of the tactical orders process. Orders are issued on formatted sheets, procedures are expected to be followed exactly, and norms for time requirements are established in regulations. These norms and regulations take on the authority of "law." The penalties for disregarding or disobeying the established norms can be very severe. The advantage of this approach is consistency of execution and a system that can be quickly trained and absorbed. The Soviets appear to achieve effective results with minimum training. Furthermore, the Soviet system is tailor made for computerization.

How Each System Was Adapted to Doctrine

In the Wehrmacht's case, the implicit understanding that was developed through the officer education process suited the decentralized "mission tactics" approach to maneuver warfare. The implicit understanding and the requirement for decisive action was a perfect compliment to the Wehrmacht's style of warfighting. Emphasizing initiative, independent decisions, decisive action, and the subordinate's duty to disobey orders when the situation demanded, the Wehrmacht increased its fighting capability to a remarkable degree.

In the Soviet Army's case, the "detailed orders" approach to maneuver warfare is the cornerstone of their system of "Troop Control." Centralized planning and decentralized execution, within the narrow parameters established by the plan, fit the traditional Russian style of war. Reluctant to accept responsibility outside the letter of the order, "Troop Control" provides the positive control necessary to maintain the tempo required of Soviet operations.

Time, The Critical Factor

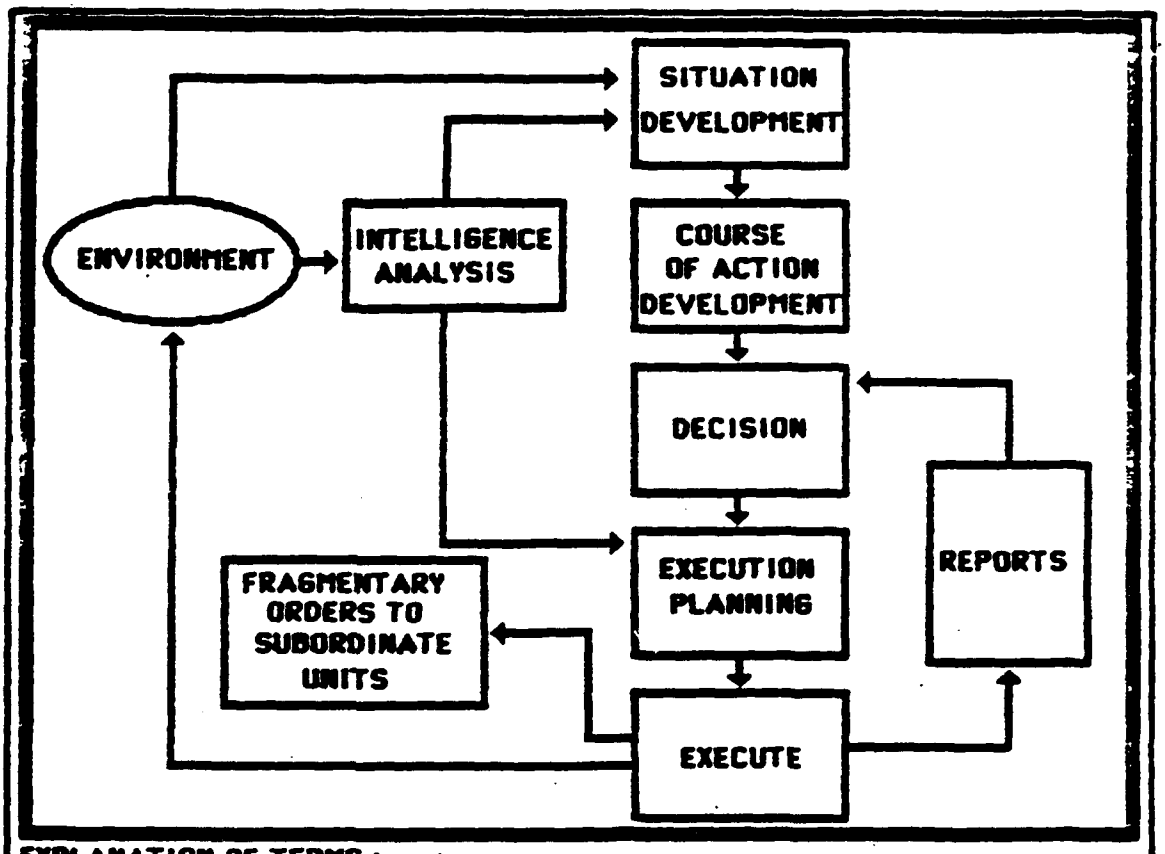
The Wehrmacht gained an appreciable time advantage over their opponents in most of their tactical engagements by quick decision making and the use of oral operations orders. Decisions were usually made by the commander and his deputy or chief of staff. Committee briefings, long situation analysis and inordinate

detail did not generally occur. The use of mission orders and oral operation order techniques were standard practice in the Wehrmacht and was a critical element in their tactical flexibility.

The Soviet Army, on the other hand, attempts to gain a time advantage over their opponents with scientific precision. Soviet orders minimize words and emphasize graphics, sketches, and diagrams. With the use of "order battle drills," standardized formatted orders and procedures, and a wide variety of both manual and electronic decision aids, the Soviets can plan and execute combat orders with remarkable speed. Whether all Soviet units can meet the high standards set by their training manuals remains to be seen. The fact remains that the Soviets believe that their time standards are realistic and achievable.

The Tactical Orders Process Model

Using the Troop leading Procedures, the Joint Time Sensitive Planning Process, and Major Orr's Combat Operations Process , a practical model for establishing the procedures of the tactical orders process was created. First, the Troop Leading Procedures were used as the starting point to adapt a standard U.S. Army technique; second Major Orr's "Combat Operations Process Model" was used to emphasize the needs of combat intelligence; and third, the steps of the Joint Time Sensitive Planning sequence were used to key on the criticality of time. The Tactical Orders Process model is shown in Figure 7-2.



EXPLANATION OF TERMS:

1. ENVIRONMENT: The significant, external factors that will impact on the tactical situation such as weather, terrain, enemy forces, and the status of ffriendly forces.
2. SITUATION DEVELOPMENT: The commander receives the mission from the higher commander or deduces the need to act. Significant tactical information is collected and analyzed
3. COURSE OF ACTION DEVELOPMENT COAs are developed & presented to the commander
4. DECISION: The commander makes his decision based on the information presented and his best judgment.
5. EXECUTION PLANNING: The commander and/or staff prepares the operations order.
6. EXECUTE: The commander supervises & issues FRAG orders to accomplish the mission.
7. INTELLIGENCE ANALYSIS: The Intelligence Preparation of the Battlefield (IPB) effort and information derived from reconnaissance to confirm the IPB.
8. FRAGMENTORY ORDERS TO SUBORDINATE UNITS: Orders that change the original plan.
9. REPORTS: Exchange of information and status.

FIGURE 7-2

The model combines the Joint Time Sensitive Planning Process and the Combat operations Process Model into one simplified process. Figure 7-2 portrays the orders process based on the five general categories of evaluation derived from the Joint Time Sensitive Planning Process: Situation Development, Course of Action Development, the Decision, Execution Planning, and Execution. The specifics of these criteria are defined below:

1. Situation Development - This step involves the receipt of a mission from a higher commander or the deduction of a mission by the force commander. It includes issuing warning orders, the communication of the commander's intent and the processing of significant tactical information relevant to the accomplishment of the mission.

2. Course of Action Development - This step involves the development of several courses of action, guided by the commander's intent that can accomplish the mission.

3. Decision - The commander, based on the best presentation of the available information, decides on a course of action.

4. Execution Planning - This step encompasses the preparation of the order and the issue of the order.

5. Execute - The commander, aided by his staff, supervises the execution of the mission and issues fragmentary orders and orders the execution of branch plans as determined by his judgment of the situation.

Figure 7-3 builds the model into the troop leading procedures. Both commanders and staffs can now employ the same doctrinal process. Figure 7-4 and 7-5 expand these procedures for tactical staffs. Staff procedures that were developed by the various other "decision making methodologies" are now built upon one doctrinal base.

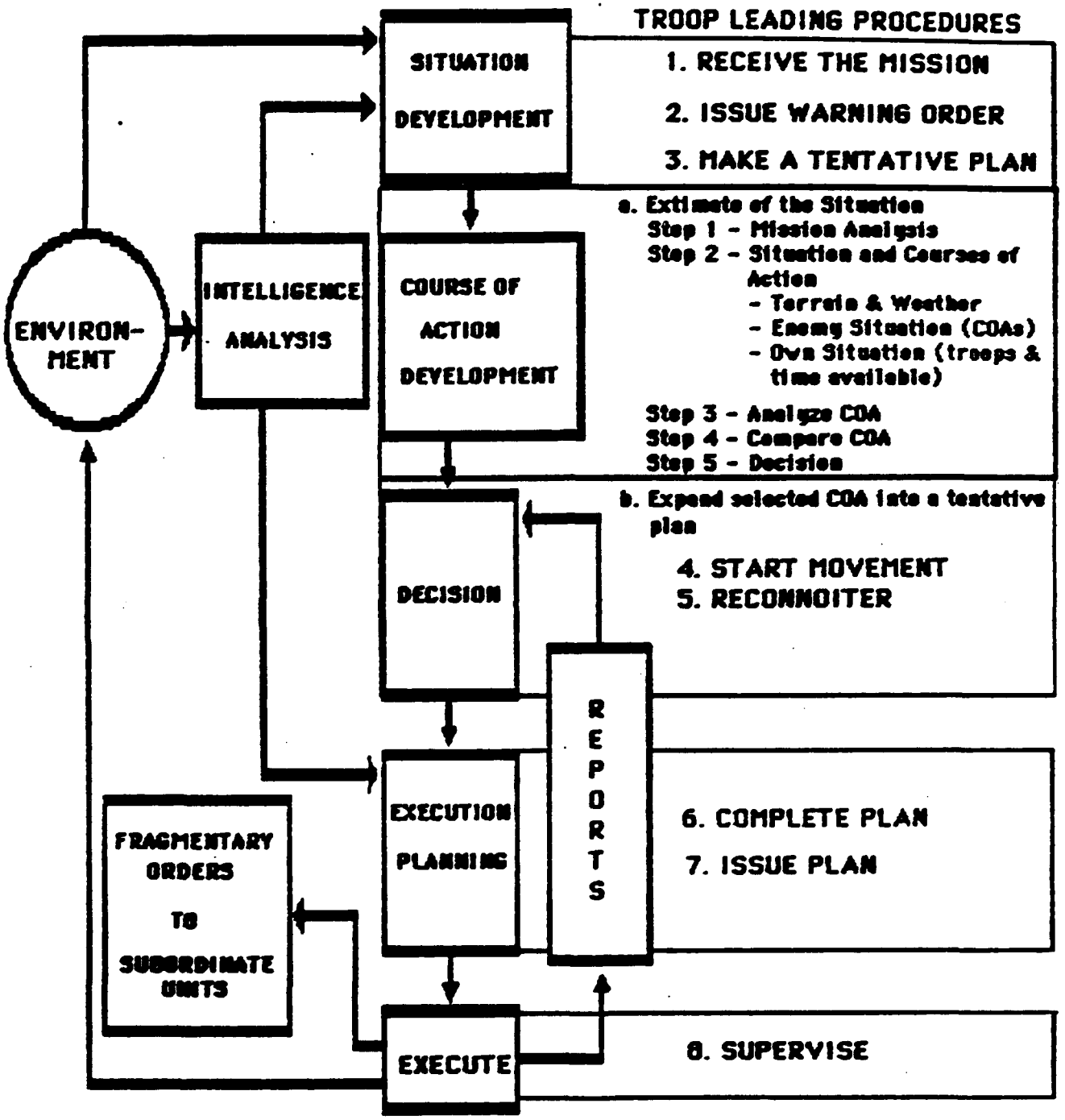

TROOP LEADING PROCEDURES
SITUATION DEVELOPMENT
1. RECEIVE THE MISSION
2. ISSUE WARNING ORDER
3. MAKE A TENTATIVE PLAN
a. Estimate of the Situation
Step 1 - Mission Analysis
Step 2 - Situation and Courses of Action
- Terrain & Weather
- Enemy Situation (COAs)
- Own Situation (troops & time available)
Step 3 - Analyze COA
Step 4 - Compare COA
Step 5 - Decision
ENVIRON-MENT
INTELLIGENCE ANALYSIS
COURSE OF ACTION DEVELOPMENT
b. Expand selected COA into a tentative plan
4. START MOVEMENT
5. RECONNOITER
DECISION
REPORTS
EXECUTION PLANNING
6. COMPLETE PLAN
7. ISSUE PLAN
FRAGMENTARY ORDERS TO SUBORDINATE UNITS
EXECUTE
8. SUPERVISE

Figure 7-3

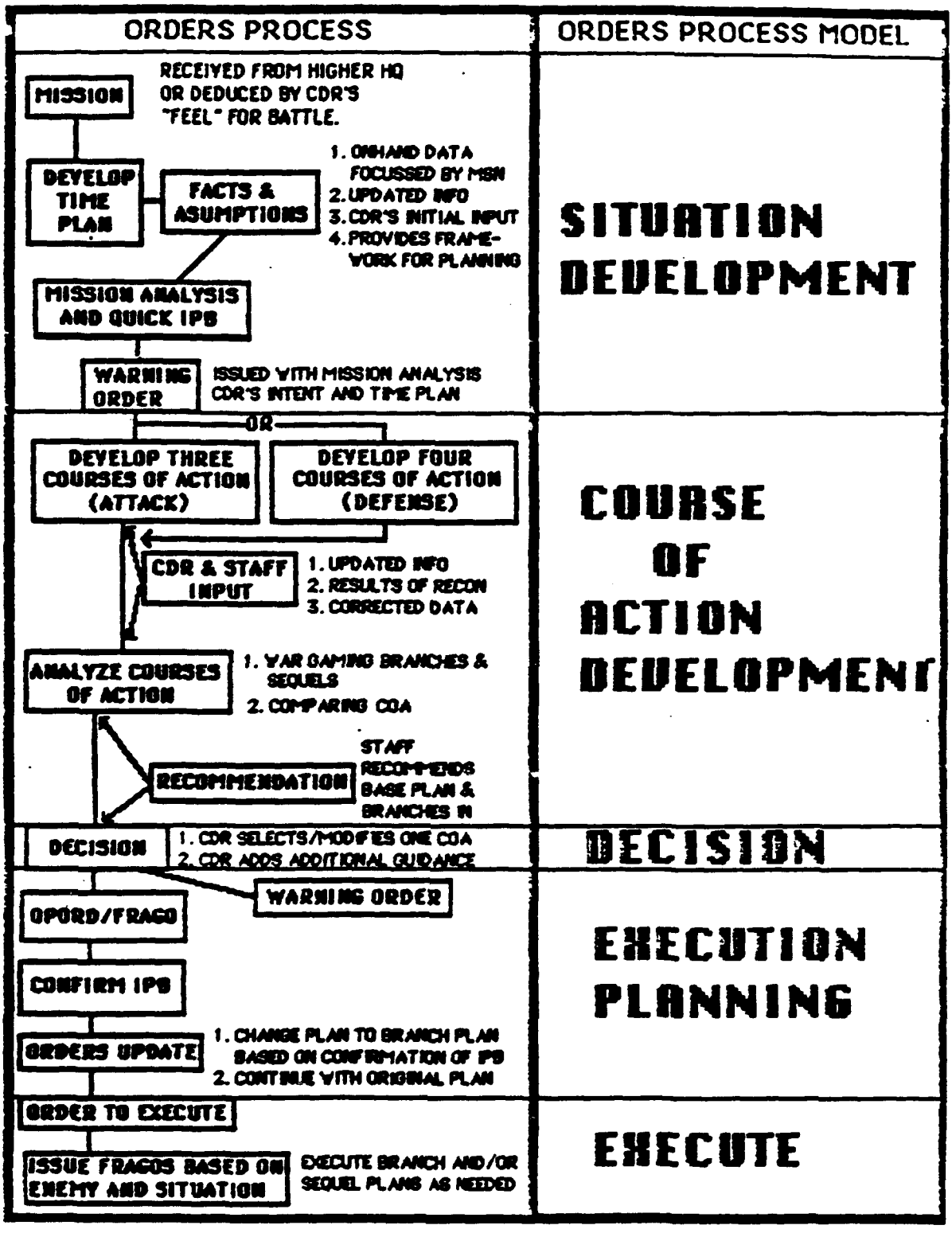

ORDERS PROCESS
ORDERS PROCESS MODEL
MISSION
RECEIVED FROM HIGHER HQ OR DEDUCED BY CDR'S "FEEL" FOR BATTLE.
DEVELOP TIME PLAN
FACTS & ASUMPTIONS
1. ONHAND DATA FOCUSSED BY MSN
2. UPDATED INFO
3. CDR'S INITIAL INPUT
4. PROVIDES FRAME-WORK FOR PLANNING
SITUATION DEVELOPMENT
MISSION ANALYSIS AND QUICK IPB
WARNING ORDER
ISSUED WITH MISSION ANALYSIS CDR'S INTENT AND TIME PLAN
OR
DEVELOP THREE COURSES OF ACTION (ATTACK)
DEVELOP FOUR COURSES OF ACTION (DEFENSE)
CDR & STAFF INPUT
1. UPDATED INFO
2. RESULTS OF RECON
3. CORRECTED DATA
COURSE OF ACTION DEVELOPMENT
ANALYZE COURSES OF ACTION
1. WAR GAMING BRANCHES & SEQUELS
2. COMPARING COA
STAFF RECOMMENDS BASE PLAN & BRANCHES IN
RECOMMENDATION
DECISION
1. CDR SELECTS/MODIFIES ONE COA
2. CDR ADDS ADDITIONAL GUIDANCE
DECISION
WARNING ORDER
OPORD/FRAGO
CONFIRM IPB
ORDERS UPDATE
1. CHANGE PLAN TO BRANCH PLAN BASED ON CONFIRMATION OF IPB
2. CONTINUE WITH ORIGINAL PLAN
EXECUTION PLANNING
ORDER TO EXECUTE
ISSUE FRAGOS BASED ON ENEMY AND SITUATION
EXECUTE BRANCH AND/OR SEQUEL PLANS AS NEEDED
EXECUTE

FIGURE 7-4

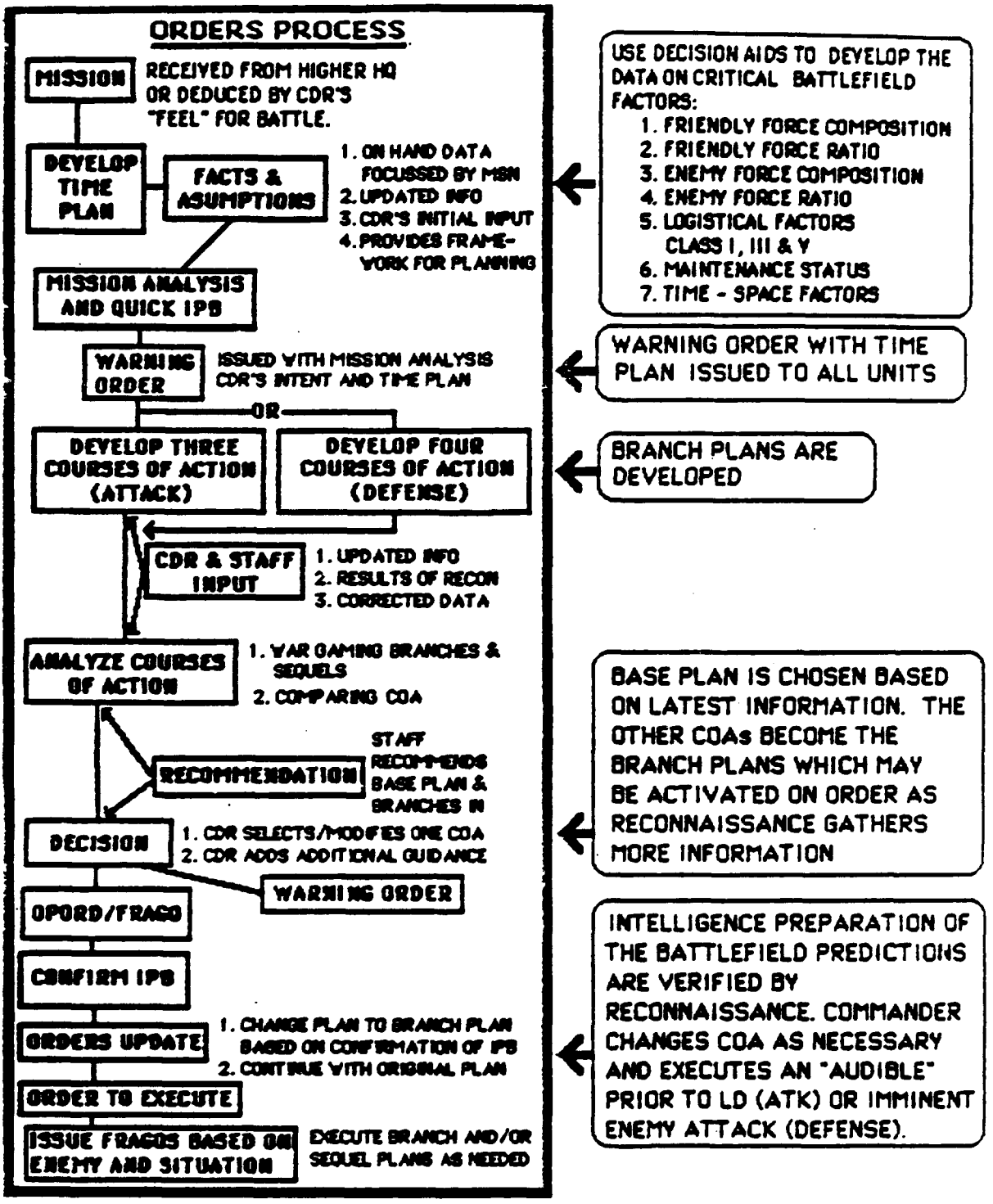

ORDERS PROCESS
MISSION
RECEIVED FROM HIGHER HQ OR DEDUCED BY CDR'S "FEEL" FOR BATTLE.
DEVELOP TIME PLAN
FACTS & ASUMPTIONS
1. ON HAND DATA FOCUSSED BY MSN
2. UPDATED INFO
3. CDR'S INITIAL INPUT
4. PROVIDES FRAME-WORK FOR PLANNING
MISSION ANALYSIS AND QUICK IPB
WARNING ORDER
ISSUED WITH MISSION ANALYSIS CDR'S INTENT AND TIME PLAN
OR
DEVELOP THREE COURSES OF ACTION (ATTACK)
DEVELOP FOUR COURSES OF ACTION (DEFENSE)
CDR & STAFF INPUT
1. UPDATED INFO
2. RESULTS OF RECON
3. CORRECTED DATA
ANALYZE COURSES OF ACTION
1. WAR GAMING BRANCHES & SEQUELS
2. COMPARING COA
STAFF RECOMMENDS BASE PLAN & BRANCHES IN
RECOMMENDATION
DECISION
1. CDR SELECTS/MODIFIES ONE COA
2. CDR ADDS ADDITIONAL GUIDANCE
WARNING ORDER
OPORD/FRAGO
CONFIRM IPB
ORDERS UPDATE
1. CHANGE PLAN TO BRANCH PLAN BASED ON CONFIRMATION OF IPB
2. CONTINUE WITH ORIGINAL PLAN
ORDER TO EXECUTE
ISSUE FRAGOS BASED ON ENEMY AND SITUATION
EXECUTE BRANCH AND/OR SEQUEL PLANS AS NEEDED
USE DECISION AIDS TO DEVELOP THE DATA ON CRITICAL BATTLEFIELD FACTORS:
1. FRIENDLY FORCE COMPOSITION
2. FRIENDLY FORCE RATIO
3. ENEMY FORCE COMPOSITION
4. ENEMY FORCE RATIO
5. LOGISTICAL FACTORS CLASS I, III & V
6. MAINTENANCE STATUS
7. TIME - SPACE FACTORS
WARNING ORDER WITH TIME PLAN ISSUED TO ALL UNITS
BRANCH PLANS ARE DEVELOPED
BASE PLAN IS CHOSEN BASED ON LATEST INFORMATION. THE OTHER COAs BECOME THE BRANCH PLANS WHICH MAY BE ACTIVATED ON ORDER AS RECONNAISSANCE GATHERS MORE INFORMATION
INTELLIGENCE PREPARATION OF THE BATTLEFIELD PREDICTIONS ARE VERIFIED BY RECONNAISSANCE. COMMANDER CHANGES COA AS NECESSARY AND EXECUTES AN "AUDIBLE" PRIOR TO LD (ATK) OR IMMINENT ENEMY ATTACK (DEFENSE).

FIGURE 7-5

The AirLand Battle Combat Order

Information processing changes are needed to speed up the orders process to successfully conduct AirLand Battle at the tactical level. Based upon the study of the Wehrmacht and Soviet tactical orders process, the formats for the Warning Order and Operation Order were altered. The revised Warning Order consists of two parts; a time plan, and the warning order. The format for the Warning Order is shown in Figure 7-6 a & b.

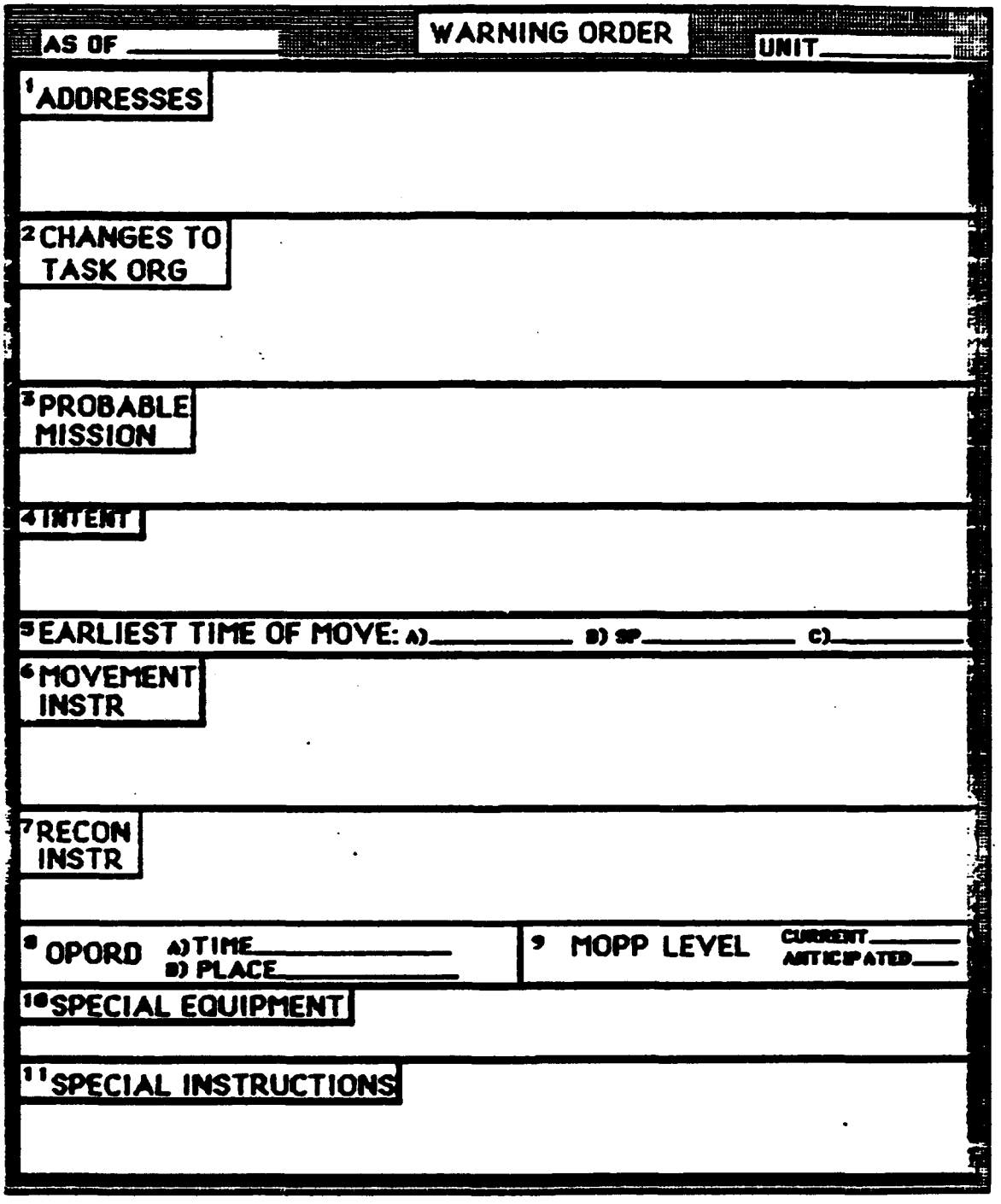
Time planning is critical to the effective use of available planning time. A time plan (an example is shown in Figure 7-6 a) should accompany each warning order. This is a particularly important tool to insure that subordinates get enough time to plan, rehearse and prepare their own orders. The backward planning process, where the time is planned from the crossing of the line of departure or the expected time of enemy attack back to the present time, should be used. In addition, it is very important to what type of time subordinates are given for their own planning. One hour of daylight is worth several hours of darkness.

The warning order shown in Figure 7-6 b is designed to provide a standard format that will speed up the transmission of the warning orders. Each entry has a line number to facilitate transmission over the FM tactical radios. The warning order shown in Figure 7-6 b can be written down for reference on this form and then transmitted over the FM radio, or mimeographed/faxed for hard copy distribution.

TASK FORCE PLANNING TIME LINE

TIME	ACTION	NOTE	OIC
1000	RECEIVE MISSION TO CONDUCT EARLY MORNING ATTACK		CDR
1020	ISSUE TIME PLAN & WARNORD	TIME PLAN & WARNORD	S3
1100	CONDUCT RECONNAISSANCE	TENTATIVE PLAN	CMD GRP
1300	ISSUE OPERATIONS ORDER TO COMMAND GROUP OVERLOOKING THE TERRAIN IF POSSIBLE		CDR AND STAFF
1800	SUNSET		
1915	REFUELING OPERATIONS, PREPARATION		CDRs S4
0300	MOONRISE		
0345	INTELLIGENCE UPDATE	LATEST INTEL	CDR GRP & STAFF
0415	DEPART ASSEMBLY AREA	RADIO SILENCE	UNITS
0510	CROSS LINE OF DEPARTURE	FRAGOs AS NECESSARY	CDR
0530			
0545	SUNRISE	EXECUTE BRANCH PLANS ON ORDER	
0730	DESTROY ENEMY ON OBJECTIVE		CDR

Figure 7-6 a


AS OF
WARNING ORDER
UNIT
1 ADDRESSES
2 CHANGES TO TASK ORG
3 PROBABLE MISSION
4 INTENT
5 EARLIEST TIME OF MOVE: A) B) SP C)
6 MOVEMENT INSTR
7 RECON INSTR
8 OPORD A) TIME B) PLACE
9 MOPP LEVEL CURRENT ANTICIPATED
10 SPECIAL EQUIPMENT
11 SPECIAL INSTRUCTIONS

AIRLAND BATTLE OPERATIONS ORDER FORMAT

TASK ORGANIZATION (How the unit is organized to fight)

1. SITUATION:

A. ENEMY FORCES

B. FRIENDLY FORCES

C. ATTACHMENTS / DETACHMENTS

D. COMMANDER'S INTENT OF THE COMMANDERS TWO ECHELONS ABOVE

2. MISSION: A CLEAR STATEMENT OF WHAT THE UNIT IS TO DO, DEFINED IN TERMS OF THE ENEMY, NOT THE TERRAIN.

3. EXECUTION:

A. COMMANDER'S INTENT - THE ACID TEST OF INTENT: TO ENABLE SUBORDINATES TO ACT CORRECTLY IF ORDERS ARE NOT ISSUED IN TIME OR THE SITUATION CHANGES AND THE INITIAL ORDERS ARE NO LONGER APPLICABLE.

B. CONCEPT OF THE OPERATION: DESIGNATE THE MAIN EFFORT, THE INITIAL AXIS OF ADVANCE/LINE OF DEFENSE,ENEMY DEFEAT MECHANISM AND ANY LIMITING INSTRUCTIONS.

C. SUBORDINATE UNIT MISSIONS: USUALLY EXPRESSED IN TERMS OF THE ENEMY NOT TERRAIN.

D. COORDINATING INSTRUCTIONS (non SOP information)

4. SERVICE SUPPORT

A. RESUPPLY OPERATIONS

B. MAINTENANCE OPERATIONS

C. MEDICAL EVACUATION

D. ENEMY PRISONERS OF WAR

5. COMMAND AND SIGNAL

A. COMMAND (location of leader/commander and the succession of command)

B. SIGNAL (to include frequencies, codewords and anti-jamming actions)

Figure 7-7

A proposed format for the AirLand Battle mission order, adapted from William S. Lind in his Maneuver Warfare Handbook , is shown above in Figure 7-7. The mission type order establishes a format that is different from the traditional five paragraph field order in four significant ways:

1) SITUATION, Paragraph 1.d: The commander's intent is added to clearly explain the commander's intent two echelons above the unit that will execute the order. The intent of the commanders two echelons above the unit issuing the order must also be understood to execute "mission tactics." The explanation of this intent, what the commanders two echelons above want to accomplish, is critical to develop a clear understanding of the purpose of the mission. For a battalion order this requires the intent of the brigade and division commander. This information has been placed as the last item of Paragraph 1, Situation by military reformist William S. Lind in his Maneuver Warfare Handbook. It is a short description, in two or three sentences, of the commander's vision of the battlefield and his desired end state.

2) MISSION : The mission statement is usually defined in terms of the enemy, not the terrain. The phrase "in order to" is added to specify what the combat action is to accomplish. This explains the "why" for future actions. As stated earlier, a mission type order orients on the enemy force, not on terrain. Lets say, for example , that an armor heavy battalion Task Force is

given the mission to destroy a Motorized Rifle Battalion in their designated zone of attack. To restrict the attack by orienting the focus on a piece of ground that may or may not be important is "detailed orders tactics" at its worst. It may be necessary to attack Hill 781, but to attack the hill where there is no enemy and no inherent advantage for seizing that particular piece of real estate, ties the hands of the commander and reduces his flexibility and initiative. More importantly, he may seize the designated objective and watch the enemy reposition or withdraw from his sector. But don't forget, he did what he was told to do, seize that hill!

3) Execution, Paragraph 3.a.: This sub paragraph becomes the formal location to express the commander's intent. It can be written with a few short sentences or drawn graphically in the form of a sketch. The commander's intent must clearly state how the commander visualizes the battle. The commanders intent is designed to tell his subordinates what is to be accomplished, and how success is to be measured. "It is the 'tactical strategy' of the commander. What the commander is trying to achieve and the critical aspects of how he hopes to achieve it...It is also the 'criteria of relevance" or the measure of effectiveness....These criteria of relevance or this measure of success should contain the critical 'why' of the operation." [3]

The acid test of the transmission of the commander's intent is to determine what actions a subordinate leader would take if the situation as established in the basic plan were to change and

he was unable to communicate with his superior. In other words, "what are your actions now, once the situation has changed from the preconceived notions of the original plan, and the commander cannot be reached for advise or direction?" If the subordinate leader understands the commanders intent he could be able to take the initiative and carry on with the focus of the main effort to accomplish the mission as if his commander had given the instructions himself. "Because commander's intent is the criterion of relevance, it does not tell subordinates what to do, but rather how what they do will be measured." [4]

4) Execution, Paragraph 3.b. becomes the concept of the operation. In every order, the main effort is designated in the concept of the operation sub paragraph. The focus of the main effort becomes the main thrust of subsequent decisions. The main effort is clearly stated in paragraph 3 (b), along with the initial axis of advance and any limiting instructions. The main effort is the driving force of the commander's plan. The main effort should, in almost every case, get the lion's share of the combat and combat support power at the disposal of the commander. Furthermore, the commander will more than likely position himself near the main effort in order to take advantage of the opportunity for forward command at the critical moment.

"Friction" changes most plans at the sound of the first gunshot. The tactical planner must take into account the chaos that will be the inevitable result of combat. The mission-type operation order develops alternate plans that permit the plan to be

changed when more information on the enemy becomes available. These plans are outlined in the concept of the operation. In this manner, the plan focuses on the enemy. The commander does not attempt to force his plan to be successful, regardless of the enemy situation. Instead he keys his plan on the enemy and develops flexible contingency plans that can be executed on-order when the enemy situation becomes clearer. The tactical planner will produce two , three or four possible options for execution for each plan.

These options are listed in the concept of the operation in the order of their likelihood and can be drawn on each overlay for quick identification and execution. With the name of the axis or a given codeword the commander has the flexibility to change plans in the middle of battle with little disruption. More importantly, if communications are lost, and the situation arises, subordinate units can still execute alternate plans on their initiative and their understanding of the commander's intent. The risk of false execution outweighs the sure destruction of doing nothing in almost every case.

Decision Sequencing

One method that was discovered in studying the Soviet tactical orders process was their use graphic methods to transmit ideas quickly. The Soviets employ a great amount of information in their tactical orders process with pictures, graphics and

diagrams. The Soviets use network and PERT diagrams to clarify complex situations. Decision Sequencing is an attempt to use a simple network diagram to explain the commander's decision process concerning a tactical mission. The simple network diagrams in Figure 7-8 (battalion attack) and 7-9 (battalion defense) explain the commander's intent with regard to decision making. The use of such diagrams can help clarify decision making sequences and can be used to graphically portray the commander's intent.

DECISION SEQUENCING FOR AN AIRLAND BATTLE ATTACK

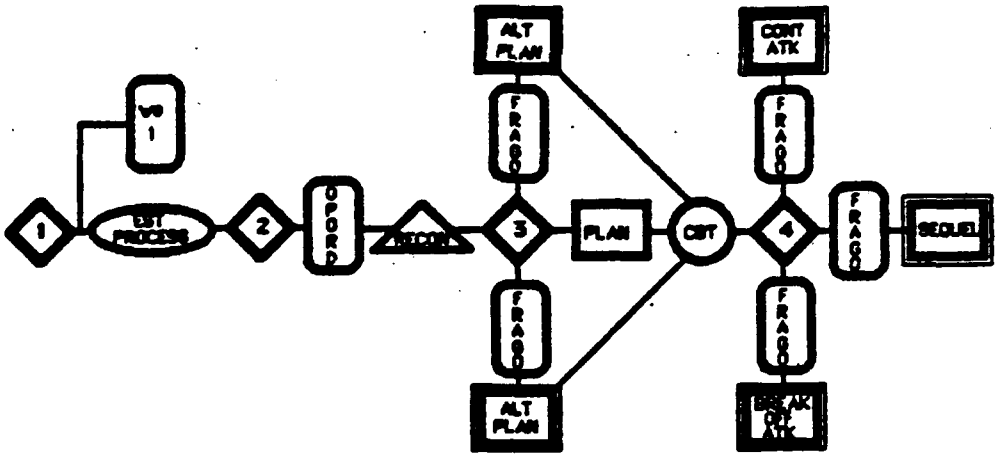


Figure 7-8

DECISION SEQUENCING FOR AN AIRLAND BATTLE DEFENSE

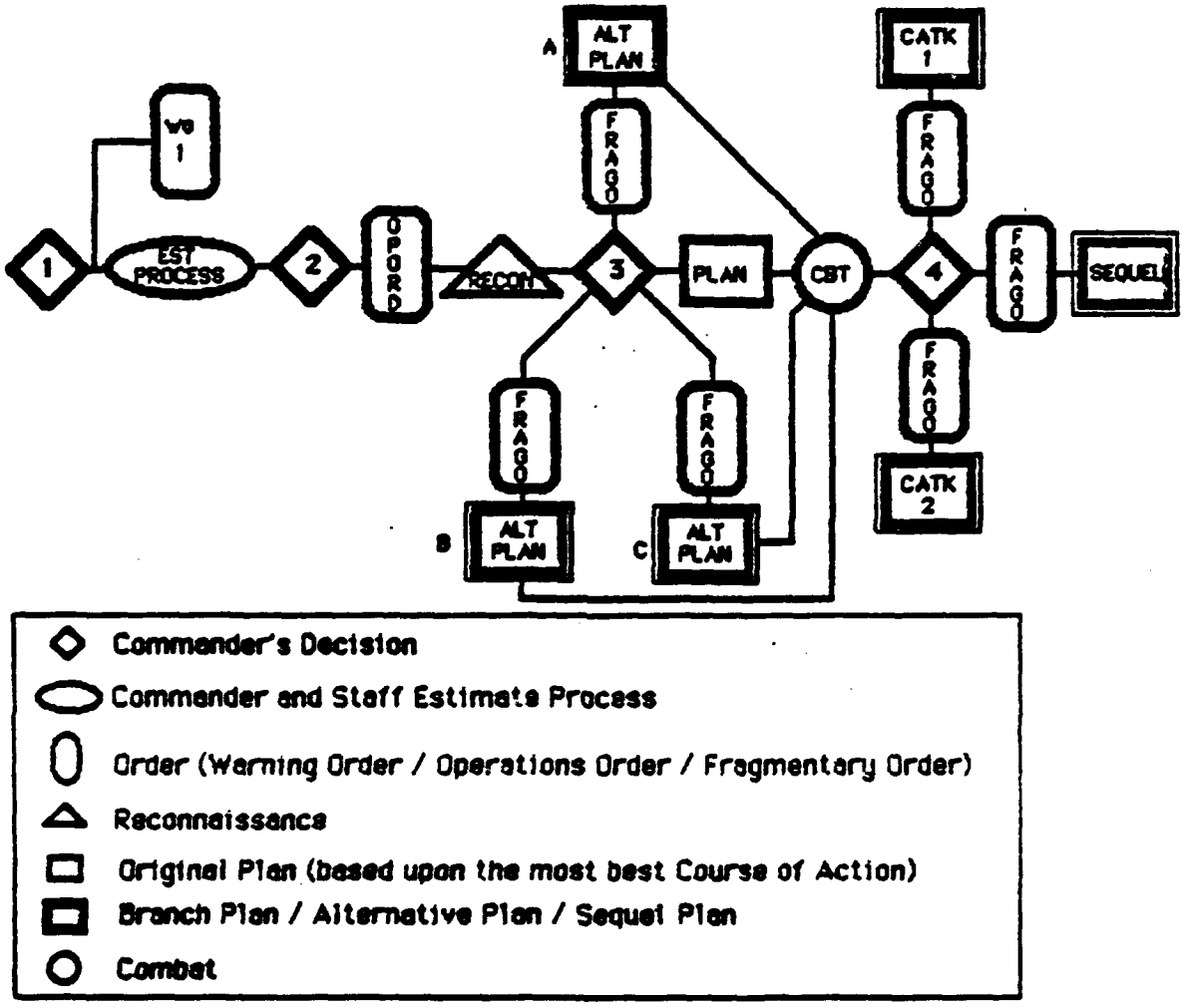


Figure 7-9

Adapting Tactical Planning to Time

To effectively use available planning time, units must have a standardized tactical orders process that considers the "compression of time" created during tactical operations. In order to gain the maximum time advantage over the enemy, four specific operation order criteria have been developed: The Time Critical Order; The Time Sensitive Order; The Hasty Order; and the Deliberate Order.

The **Time Critical Order** is shown in Figure 7-10. This order criteria shows the operation order products that are expected when the time from mission receipt to mission start time is 3 hours or less. The particular orders product is shown in the left column. Responsibility for the operation order products is displayed in the center column. The format for the operations order product is shown in the right column. The size of the orders group that is expected to be issued the order is shown in the upper right heading. In each case the time available to subordinate units, as determined by the 1/3 - 2/3 rule is shown in the heading.

The **Time Sensitive Order** is shown in Figure 7-11. This order criteria shows the operation order products that are expected when the time from mission receipt to mission start time is 9 hours or less. The **Hasty Order** is shown in Figure 7-12. This order criteria shows the operation order products that are expected when the time from mission receipt to mission start

time is 15 hours or less. The **Deliberate Order** is shown in Figure 7-13. This order criteria shows the operation order products that are expected when the time from mission receipt to mission start time is 24 hours or less.

AirLand Battle Operations Orders (For Orders Group A)
Time Critical [1/3 Time = 1 hour]
(Time from receipt of mission to mission start ≤ 3 hours)

Staff Product	Responsibility	Format
Time Schedule	XO	Written, included in the Warning Order
Warning Order	Cdr/S3	Oral, issued over FM radio
Operations Order	Cdr/Staff	Oral with Sketch
Enemy Situation Overlay w/Priority Intelligence Requirements	S2	Acetate (1 copy per subordinate unit commander/leader). Issued during the Oral Operations Order.
Operations Overlay	S3	Acetate (1 copy per subordinate unit commander/leader). Issued during the Oral Operations Order.
Movement Overlay	S4	Acetate (1 copy per subordinate unit commander/leader). Issued during the Oral Operations Order.

Figure 7-10

AirLand Battle Operations Orders

For Orders Group B

Time Sensitive [1/3 time = 3 hours]

(Time from receipt of mission to mission start 4-9 hours)

Staff Product	Responsibility	Format
Time Schedule	XO	Written, included in the Warning Order
Warning Order	Cdr/S3	Oral, issued over FM radio
Operations Order	Cdr/Staff	Oral with Sketch
Enemy Situation Overlay w/Priority Intelligence Requirements	S2	Acetate (1 copy per subordinate unit commander/leader). Issued during the Oral Operations Order.
Operations Overlay	S3	Acetate (1 copy per subordinate unit commander/leader). Issued during the Oral Operations Order.
Movement Overlay	S4	Acetate (1 copy per subordinate unit commander/leader). Issued during the Oral Operations Order.
Combat Service Support Overlay/Matrix	S4	Placed on Movement Overlay
Personnel Status Report	S1	Briefed orally at Operations Order briefing
Fire Support Plan Overlay/Matrix	FSO	Briefed orally at Operations Order briefing
Obstacle & Barrier Plan Overlay/Matrix	ENG	Briefed orally at Operations Order briefing
Close Air Support Plan	ALO	Briefed orally at Operations Order briefing
Air Defense Plan	ADA Officer	Briefed orally at Operations Order briefing
NBC Defense & Decontamination Plan	Chem Officer	Briefed orally at Operations Order briefing
Communications Plan	CESO	Briefed orally at Operations Order briefing

Figure 7-11

AirLand Battle Operations Orders

Orders Group C

Hasty OPORD [1/3 time = 5 hours]

(9 hours > Time from receipt of mission to mission start ≥ 15 hours)

Staff Product	Responsibility	Format
Time Schedule	XO	Written, included in the Warning Order
Warning Order	S3	Oral, issued over FM radio
Operations Order and Operations Overlay	S3	Written Matrix Order w/Sketches Includes a graphic Cdr's intent Sketch, Execution matrix and 2 or more contingency plans.
Enemy Situation Overlay w/Priority Intelligence Requirements and Recon and Security Plan Matrix/Overlay	S2	Acetate (1 copy per subordinate unit commander/leader). Issued during the Operations Order.
Movement Overlay and Combat Service Support Overlay/Matrix	S4	Briefed and issued with written Matrix /Overlay. Includes MSR, ASRs, CSS Locations, RSR and CSR, and Medical Evacuation information.
Personnel Status Report	S1	Briefed and issued with written Matrix
Fire Support Plan Overlay/Matrix	FSO	Briefed and issued with written Matrix /Overlay
Obstacle & Barrier Plan Overlay/Matrix	ENG	Briefed and issued with written Matrix /Overlay
Close Air Support Plan	ALO	Briefed orally at Operations Order briefing
Air Defense Plan	ADA Officer	Briefed and issued with written Matrix
NBC Defense & Decontamination Plan	Chem Officer	Briefed and issued with written Matrix
Communications Plan	CESO	Briefed and issued with written Matrix

Figure 7-12

AirLand Battle Operations Orders

For Orders Group D

Deliberate OPORD [1/3 time = 7 hours]

(Time from receipt of mission to mission start > 21 hours)

Staff Product	Responsibility	Format
Time Schedule	XO	Written, included in the Warning Order
Warning Order	S3	Oral (issued over FM radio) & written
Operations Order and Operations Overlay	S3	Written Matrix Order w/Sketches includes a graphic Cdr's intent Sketch, Execution matrix and 2 or more contingency plans.
Enemy Situation Overlay w/Priority Intelligence Requirements and Recon and Security Plan Matrix/Overlay	S2	Acetate (1 copy per subordinate unit commander/leader). Issued during the Operations Order.
Movement Overlay and Combat Service Support Overlay/Matrix	S4	Briefed and issued with written Matrix /Overlay. Includes MSR, ASRs, CSS Locations, RSR and CSR, and Medical Evacuation information.
Personnel Status Report	S1	Briefed and issued with written Matrix
Fire Support Plan Overlay/Matrix	FSO	Briefed and issued with written Matrix and Overlay
Obstacle & Barrier Plan Overlay/Matrix	ENG	Briefed and issued with written Matrix and Overlay
Close Air Support Plan	ALO	Briefed and issued with written Matrix
Air Defense Plan	ADA Officer	Briefed and issued with written Matrix
NBC Defense & Decontamination Plan	Chem Officer	Briefed and issued with written Matrix
Communications Plan	CESO	Briefed and issued with written Matrix

Figure 7-13

Summary

The historical analysis of the tactical orders process of the Wehrmacht, the Soviet Army, and the U.S. Army offers important insights into methods to improve orders process techniques. Caught somewhere between the Wehrmacht approach and the Soviet approach, the United States Army has leaned towards the detailed orders tactics side of the orders continuum. "For reasons that are hard to fathom but which may have something to do with the fact that scientific management was first developed and widely applied in the United States, American commanders never developed anything resembling *Auftragstaktik*, the principles of which, according to General Patton, many of them found difficult to understand." [5]

The adoption of the doctrine of AirLand Battle is an attempt to reverse this historical trend. AirLand Battle clearly embraces maneuver warfare theory and the employment of mission tactics *(Auftragstaktik)*. To put this doctrine into practice on the battlefield, the United States Army needs a common tactical orders process that is geared to the demands of AirLand Battle doctrine. The Orders Continuum (Figure 7-1) graphically portrays the direction of the current doctrine with regards to the tactical orders process.

The tactical orders process developed in this study (Figure 7-2) builds on traditional doctrine while incorporating important elements of AirLand Battle Doctrine. The adaptation of the five

paragraph operations order to an AirLand Battle format (Figure 7-3), also incorporating the elements required by FM 100-5 (incorporating the commander's intent, and the concept of the main effort) is long overdue. The development of time sensitive criteria (Figures 7-4 through 7-9) for operations orders is directly related to the AirLand battle tenet of "agility."

End Notes Chapter 7

[1] U. S. Department of the Army, FM 100-5 Operations, (Washington, D.C: U.S. Government Printing Office, 5 May, 1986), p. 6. Hereafter listed as FM 100-5.

[2] Ibid., p. 35.

[3] Maj Edward J. Filiberti, "Command, Control and Commander's Intent," Military Review, (Fort Leavenworth, Kansas: Aug 1987), p. 55

[4] Filiberti, p. 55.

[5] Martin van Crevald, Fighting Power, German and U.S. Army Performance, 1939-1945, (Westport, Connecticut: Greenwood Press, 1982), p. 37.

Chapter 8

Conclusion

Sixty percent of the art of command (or good problem solving) is the ability to anticipate; 40 percent ... the ability to improvise, to reject the preconceived idea that has been tested and proved wrong, ... and to rule by action instead of acting by rules.
S.L.A. Marshall[1]

Plans are merely a basis for changes.
Israeli Army

Modern war will be unforgiving to units that issue late, imprecise, or misunderstood orders. The current "orders intensive" system of the U.S. Army, which produces long, wordy, typed operations orders, is a dangerous anachronism. The deployment of battlefield computers and word processors has only exacerbated this situation.

History shows that the solution may lie, not merely in new C^3 hardware, but in a change of thinking. What is needed is fewer words and pages and more time spent by battlefield commanders making things happen! What is needed is an orders process and a style of command that speeds up the transmission of the commander's intent and efficiently describes subunit tasks. What is needed is an understanding that quantity of words or written pages

does not translate into quality orders.

Under the order intensive approach, the emphasis of tactical planning in the United States Army has traditionally been placed on finding ***the best*** tactical solution for combat situations. By seeking to perfect the plan with imperfect information, time is wasted. By focusing on the singularly best tactical answer, and by directing energy in an attempt to minimize all sources of error, most units run out of planning time. Spending too much time planning, going through an endless series of estimates and wargames, staffs often rob subordinate units of the vital time needed to prepare. "Incorrect estimates of the amount of time required for the distribution of orders, for the movement of units to new locations and for the necessary reconnaissances by subordinates, frequently lead to tactical failure. [2] The result is that U.S. Army units often attempt to force through the "perfect" plan without adequate understanding and preparation.

The Commander's Dilemma

AirLand Battle doctrine emphasizes decisive action and maneuver warfare. The successful application of maneuver warfare requires a high level of training and the use of mission-type control. Mission-type control is a method of directing military operations in which subordinates are encouraged and expected to take independent action, consistent with the intent of senior commanders, in executing assigned missions. The key to understanding

mission-type control lies in the understanding of what is meant by command and control.

"Command" is what we want to do in combat. The goal is to employ mission tactics. "Control" requires intensive management. Bureaucratic control is a time robber. But management is an essential element of effective combat **training.** It is during peacetime training, when the critical element of time should be in great supply, that "control" plays its vital role in preparing leaders and units for mission tactics. Most commanders do not spend enough time controlling during peacetime training. Mission-type orders given by commanders can only be accomplished if they have controlled their units in training.

By training tactical staffs to become efficient in the "appraise the situation" phase of the decision cycle and by reducing the verbiage and administrative delays involved in the "make the decision" phase, action can

proceed at a faster pace. This takes training, commonality of thought and excellent transmission of ideas. The challenge to the military leader is to know the level of training of his forces and to consistently train them to progress to the "mission tactics" end of the spectrum. An efficient orders process can gain a time advantage over the enemy This time advantage, which can be translated into more time for combat preparation, can become a tremendous combat multiplier.

Decision Making

It is not surprising that units are confused as to the process for making military decisions. Predominately, U.S. Army tactical orders tend to follow the detailed orders philosophy. The emphasis of most units' tactical orders process is on forcing the plan to be successful. By adopting a maneuver-oriented doctrine without defining the procedures to implement the corresponding orders process style, "mission tactics," U.S. Army units have been left to their own interpretations.

The effect that this confusion has had on U.S. Army tactical planning is not hard to imagine. Too slow to be used in actual combat operations, the "Decision Making Process" of FM 101-5 is largely ignored. Most commanders still employ the trusted "troop leading procedures." Most units do not understand or teach the military "Decision Making Process," the "problem solving process" or the "command and control process" as listed in their respective manuals."

The end result is a tactical orders process that varies from unit to unit. The minimum products of an operations order at each echelon of command have not been established by doctrine. The U.S. Army's tactical orders process, as it is currently understood and executed by many units in the field, is inadequate to implement AirLand Battle doctrine. FM 100-5 states that "Superior Performance in combat...depends on a well-understood doctrine for fighting." [3]

It is obvious that a clear doctrine concerning the orders process must be established to clear up this confusion. This doctrine is outlined in FM 100-5, but the specifics are missing. Units in the field need a process to prescribe an Airland Battle approach to combat orders. This study prescribes an AirLand Battle Tactical Orders Process model for use by all echelons of command in the U.S. Army. This model is shown in Figure 7-1.

AirLand Battle Combat Orders

Mission tactics are the preferred method of waging maneuver warfare. Time is always critical and mission type orders save time. This is accomplished largely by issuing verbal orders given by the senior commander overlooking the terrain. When decisions are made at the point of execution, battle opportunities can be taken advantage of as they occur without loss of time. The command style and staff functioning that contribute most to maneuver warfare is characterized by the application of "mission orders."

Mission orders are not new to the U.S. Army. General Bruce C. Clarke, the hero of the Battle of the Bulge, employed mission orders throughout his long service in the U.S. Army:

> "In World War II, those who served in armored divisions -- and probably in other units as well -- learned that mission-type orders were a requirement if the most was to be obtained from a command....As the battle becomes more complex and unpredictable, responsibilities must be more and more decentralized. Thus mission-type orders often will be used at all

echelons of command and probably will be the rule at the division and higher levels. This will require all commanders to exercise initiative, resourcefulness, and imagination -- operating with relative freedom of action.

In our tactical forces we have built-in organizational flexibility. We must recognize this and capitalize on it in our orders. To get maximum combat power, we must have plans flexible enough to meet rapidly changing situations. But careful planning is not enough; this must be coupled with the readiness to change and adapt to situations as they are, not as they were expected to be.

Basically a mission-type order needs to cover only three important things:

1) It should clearly state what the commander issuing the order wants to have accomplished.

2) It should point out the limiting or control factors that must be observed for coordinating purposes.

3) It should delineate the resources made available to the subordinate commander and the support which he can expect or count on form sources outside his command. [4]

The mission-type order outlines a format that emphasizes "mission tactics" and the initiative of junior leaders to execute the commander's intent. It can provide an important element in the search for the "superior command and control" [5] required of AirLand Battle. In most cases, the mission-type order should be issued orally, from brigade level down, to preclude unnecessary time delays. An order issued by the commander, on the battlefield is worth ten perfect orders, mimeographed in quantity, but issued

late." Whenever possible, subordinate leaders should receive their orders face-to-face from their commanders on the ground chosen for the operation." [6]

The development of FM 100-5, Operations, and AirLand Battle doctrine have had an important effect on the tactical orders process. FM 100-5 clearly establishes the use of "mission orders." "Commanders should restrict the operations of their subordinates as little as necessary. Mission orders that specify what must be done without prescribing how it must be done should be used in most cases."[7] Although the formal changes to the five paragraph operations order have not yet been added to doctrine, FM 100-5 clearly lays out the basic requirements. The two basic requirements of an AirLand Battle operations order are the clear transmission of the commander's intent and the use of "mission orders."

The clear transmission of the commander's intent is vital to decentralized maneuver tactics. True to the precepts of FM 100-5, there has been considerable emphasis in the past ten years to formally include the "commander's intent" paragraph in the operations order format. Some doctrinal publications have changed the operations order format to include the "commander's intent" as sub paragraph (a) of paragraph (3) Execution.

Mission-type orders, therefore, are a key element in the maneuver warfare command and control process. This study prescribes a maneuver oriented, AirLand Battle format for the standard five-paragraph field order. This AirLand Battle

operations order format is shown in Figure 7-7.

Time sensitive criteria for operation order products are shown in Figures 7-10 through 7-13.

Summary

This study developed the concept of the "AirLand Battle tactical orders process" and analyzed the requirements of this system to the tactical orders processes of the Wehrmacht, the Soviet Army, and the United States Army. It developed a conceptual way of looking at tactical orders systems, the "detailed orders tactics" approach and the "mission tactics" approach, and outlined how each system could approach maneuver warfare.

Finally this approach identified key successful tactical orders techniques from the Wehrmacht and Soviet Army tactical orders process and recommended their inclusion into "AirLand Battle tactical orders process."

This study recommends the adoption of a decision methodology as shown in Figure 7-2 through 7-5 , a mission order format as shown in Figure 7-6(a&b) and 7-7, decision sequencing as shown in Figures 7-8 and 7-9, and a time sensitive planning scheme as shown in Figure 7-10 (Time Critical OPORD), Figure 7-11 (Time Sensitive OPORD), Figure 7-12 (Hasty OPORD), and Figure 7-13 (Deliberate OPORD).

Further areas of study include the identification and development of the minimum essential products of operations orders and a format for each of the operation orders shown above. In addition, there exists a great room of improvement in the development of simplified decision aids to support the tactical commander who does not have access to sophisticated computer technology. The purpose of these recommendations is to produce a time advantage for the tactical commander on the battlefield through the speedy and intelligent application of the tactical orders process.

End Notes Chapter 8

[1] U. S. Department of the Army, FC 101-55 Corps and Division Command and Control, (Fort Leavenworth, Kansas: U.S. Command and General Staff College, 28 February 1985), p. 1-10.

[2] Major Richard G. Tindall and Lieutenant C. T. Lanham, Infantry in Battle, (Washington, D.C: The Infantry Journal Incorporated, 1939), p. 79.

[3] U. S. Department of the Army, FM 100-5 Operations, (Washington, D.C: U.S. Government Printing Office, 5 May, 1986), p. 5. Hereafter listed as FM 100-5.

[4] General Bruce C. Clarke, Guidelines for the Leader and the Commander, (Harrisburg, Pennsylvania: Stakpole Books, 1963), p. 95.

[5] FM 100-5, p. 21

[6] Ibid., p. 21

[7] Ibid., p. 21

ANNEX A

The Development of the Wehrmacht Tactical Orders Process

Outnumbered but seldom outfought, the reputation of the German Army's tactical expertise can be traced to three very influential concepts; the institution of the German General Staff, the philosophy of "Forward Command," and the adoption of "Mission Tactics." We will examine these factors in detail in order to gain an insight into the German tactical orders process.

The General Staff

The Prussian General Staff was the architect of Prussia's victories in the last half of the 19th Century and sowed the seeds of the proficiency of the German Army in the 20th Century. "By 1870 the Prussian General staff had become a "body whose object was to fulfill exactly this function: applying to the conduct of war a continuous intelligent study, analyzing the past, appreciating the future, and providing commanders in the field with an unceasing supply of information and advice." [1]

More than any one person, Helmuth Von Moltke the Chief of the Prussian General Staff during Germany's Wars of Unification, created the General Staff into an institution that promoted Germany's tactical and operational expertise into the next century.

Under Moltke the Prussian military machine became an example of momentum in action. Orchestrating the brilliant victories over Denmark (1864), Austria (1866) and France (1870), von Moltke developed the General Staff into the educational and directing body of the German Officer Corps. Under Moltke, the Prussian General Staff, by the time of the 1870 Franco - Prussian War, became the "nervous system animating the lumbering body of the army, making possible that articulation and flexibility which alone rendered it an effective military force; and without which the French armies, huddled together in masses without the technical ability to disperse, found numbers a source not of strength but of fatal weakness." [2]

The first purpose of the institution of the General Staff was to develop a corps of thinking, self-assured officers proficient in the art of war. Victorious in 1870, the proficiency of German arms was tested again in World War I. Failing in their grand plan to conquer France as in 1870, with one giant move of the German scythe, the well trained offices of the German General Staff were crucial to the effectiveness of the Imperial German Army. Trained to take decisive advantage of their enemies mistakes, the corps of officers trained under the general Staff system created many of Germany's victories from the jaws of defeat. The great German victory at Tannenburg, in 1914 is an excellent case in point.

Here the genius of the German General Staff system was clearly demonstrated:

At this level in the German service the office of chief of staff was often synonymous with that of ***de facto*** commander, the reason being that designated army commanders might be members of Germany's royal families or general officers of great seniority who were respected figureheads but who needed the guidance of a professional at the peak of his abilities. Sometimes, when presented with a difficult problem, the army commander and his chief of staff would retire to separate rooms to prepare their own solutions, which were then compared. Frequently they were identical, but if they were not, the best features of each were chosen. In this case, even before he had joined Hindenburg for the journey to East Prussia, Ludendorf worked out a rapid redeployment of the Eighth Army's corps which made maximum use of the frontier railway network, and then telegraphed orders directly to the corps commanders on 22 August, his action being subsequently approved by Hindenburg. This action had already been predicted in detail by Lieutenant Colonel Max Hoffman, the army's Staff Officer (Operations), so that when Hindenburg and Ludendorf arrived next day the necessary movements had already been initiated, the result being that, while a covering force had been left to delay the advance of the Russian First Army, the bulk of the Eighth Army was now concentrated against the Russian Second Army.

The episode demonstrates in the most graphic manner possible the uniform thought - pattern of the General Staff when confronted with an unexpected situation; it also emphasizes the German preference for spoken as opposed to written orders in circumstances where decisions have to be made quickly. The immediate result was that the Second Army marched into a trap and by 31 August had been encircled and crushed at Tannenburg. Hindenburg and Ludendorf now turned their attention to the Russian First Army and a fortnight later managed to destroy

> part of it with another double - envelopment in the area of the Masurian Lakes. Together, these two disasters cost Russia 250,000 of her best troops and 650 guns. [3]

The Battle of Tannenburg demonstrates the German ability to operate their decision cycle faster than their opponents. In this case, a relatively junior staff officer, trained in the methods of the General Staff, gained the time advantage necessary for victory by applying a uniformly understood tactical orders process. Lieutenant Colonel Hoffman was able to predict the correct solution to the tactical problem, and initiate action, confident that he was acting as his future commander intended, **even though he had not received any instructions!** As was typical of German military tradition, Hoffman took responsibility and acted decisively rather than wait for orders. This technique was repeated by German commanders and staff officers throughout the First World War and was the standard practice during the Second World War.

By 1918 it was apparent that the attrition approach would not create a decision on the Western Front. More men hadn't worked; the casualties had merely increased. More and heavier artillery hadn't worked; no one could advance beyond the range of the artillery which couldn't move up because it had changed the landscape into a sea of shell holes and mud. Not even the introduction of poison gas had worked. Both sides were exhausted after four years of heavy casualties with no gains to speak of.

To break the stalemate caused by the trench and the

machinegun, the German General Staff searched for the answer by developing new techniques to apply maneuver warfare. "The German plan was distinguished by a research for tactical surprise more thorough and far-reaching than in any earlier operations of the war. It is to the credit of the German command and staff that they realized how rarely the possession of superior force offsets the disadvantage of attacking in the obvious way." [4] The German General Staff believed that "German war is an affair of the intellect; the intellect is stronger than any other force." [5] They adopted new elastic defensive tactics and new offensive infiltration tactics to overcome the deadlock of the trenches. In 1918, these tactics came closer to any other approach in winning the war. Had it not been for the incursion of fresh troops from the United States, the new German tactics would have determined the war.

Abolished after the war by the Treaty of Versailles, the German General Staff continued in other forms. In spite of the treaty, "...highly trained staff officers were still being produced by clandestine methods...." [6] Germany secretly rebuilt her Army and focussed the effort on the training of the officer corps. Amazingly, only 21 years later, the German General staff produced some of the most talented tactical and operational leaders of modern warfare.

This tradition of taking responsibility and acting decisively, **in time**, was the legacy of the General Staff's education of the German Officer Corps. An example of the far reaching effect of

this legacy on the execution of tactical decisions during World War II is explained by the following quote from Major General F.W. von Mellenthin, General Rommel's chief of staff during the African Campaign:

> "...It was November 1941 near Tobruk, Westphal as G3, myself as G2, we were sitting there in the headquarters. Rommel was away for five days on the front line. He had had great success at Sidi Rezegh, he had seen the thing was not completely settled, with the result he gave an order for the Afrikakorps to go over to the pursuit near the Egyptian border and only a few forces were left at Tobruk where part of the 8th Army was within the fortress. Anyhow, as we feared, the pursuit was too early. The development near Tobruk became very dangerous, nearly untenable. Rommel was not there; we sent aircraft to look for him but we could not find him. Things became very hot, and there was no other decision but to call off the offensive from the eastern frontier, call back the Panzer divisions and give them the order to attack the enemy in the rear near Tobruk. That means G3 canceled Rommel's order and ordered all troops back from the front line to Tobruk to relieve the situation. And when Rommel came back, first he didn't look very pleased about our decision, but after 10 or 15 minutes of explanation about the situation, he agreed with a smile. This is what I wanted to explain to you, what we German General Staff want. If things are dangerous then even the smallest General Staff officer must have the courage to make a clear-cut decision." [7]

The German Philosophy of Forward Command

An excellent example of the style of leadership expected of

German commanders in World War II was displayed by General Erwin Rommel in France, 1940. The situation was desperate! The fire from the enemy on the other side of the Meuse River was murderous. After several brave attempts to cross under withering French fire, the German attackers were demoralized and stunned. Then, the division commander, General Erwin Rommel, appeared. Taking command of the 2nd Battalion, 7th Rifle Regiment of the 7th Panzer Division, he organized support for another crossing attempt. Personally leading the 2nd Battalion, he finally forced the Meuse and secured a bridgehead for the division. The next day his 7th Panzer Division was racing to the west, significantly assisting in the decisive, humiliating defeat of the French and British Armies in France in May 1940. Rommel exercised an approach to command that day that was an important combat multiplier for the German Army. This approach, called "forward command", was the standard for tactical command and control in the Wehrmacht. The purpose of this discussion is describe the "forward command" approach to tactical success on the battlefield.

The Wehrmacht's approach to command and control,"forward command," was an essential element for achieving tactical victory. "Forward command" called for senior commanders to issue orders based upon personal observation and to actually assume command of a subordinate unit during a critical point in the fighting. This approach relied heavily on thinking, independent leaders; unflinching trust in subordinate officers to carry out the

mission within the guidelines of the commander's intent; and the clear understanding that missions were directed two echelons down and that all units were required to think two echelons up.

The Germans did not believe in an orders intensive, centralized approach to command and control. Their doctrine of blitzkrieg demanded a quick, flexible and decisive means of command. "Forward command" called for senior commanders to issue orders based upon personal observation and to actually assume command of a subordinate unit during a critical point in the fighting. This relied heavily on trained, thinking, independent leaders and unflinching trust in subordinate officers to carry out the mission within the intent of the senior commander. This understanding permeated the Wehrmacht's approach to war:

> "The tempo of blitzkrieg calls for speedy and precise command, and its dynamic nature calls for anticipation. To achieve these the operational and higher level commanders have to be forward not only to see for themselves what is really happening but to get the feel of the battle.
>
> All one can add is that this command technique was not a gimmick of Rommel's but was laid down in Guderian's training manuals for the Panzertruppen. As Manteuffel put it, 'I always located where I could see and hear what was going on in front; that is near the enemy and around myself -- namely at the focal point.' [8]

This approach substituted control for guidance and trust. If the subordinates abilities did not meet the challenge of the situation, or if the situation required a more experienced head, the

senior commander was expected to take command of the subordinate unit and take decisive action. The understanding between commander and subordinate was that the senior commander's intervention was his natural prerogative.

This concept of trust became a central principle in the Wehrmacht. The following information was derived from conversations with Generalfeldmarschall Albert Kesselring, Major Ernst K.H. Doll, General der Artillerie Curt Gallenkamp, Generalleutnant Kurt Maelzer, Generalleutnant Waffen SS Max Simon, Generalleutnant Kurt Wolff, in a report titled Manual for Command and Combat Employment of Smaller Units (Based on German Experience in World War II), originally prepared by the Chief Historian, Headquarters European Command, on 17 July 1952:

> "The combat value of every unit depends on the quality of its officers. An average-trained unit, which has its weak points, can still give a good performance if it has a good commander. In the same manner, a well-trained and experienced unit may fail under a mediocre commander. The value of good leadership is proved by the confidence of the troops in their leaders, the improvement of their fighting qualities and finally by success in combat.... The confidence which the troops have in their commander will give them the assurance that his orders are correct, even if the reason behind them is not fully known.[9]

Senior commanders planned two echelons down. A division issued tasks to each of its battalions. Each regiment would receive

instructions for each of its battalions based on the division plan. The regiments would then synchronize the elements of combat power as directed by the division plan. In this manner a high degree of unity of effort was achieved. Furthermore,

every commander was required to understand the intent of the commander two echelons above his level of command. This became essential in making independent decisions in the heat of battle when senior commanders could either not be reached or not be reached in time. By clearly understanding the intent of the commanders two echelons above a subordinate leader could use the senior commander's intent to guide his actions.

The Wehrmacht expected its tactical commanders, division level and below, to lead up front, sense the situation and take decisive action without waiting for permission or further instructions. Commanders at every echelon expected their superiors to take personal command of their units in critical situations. Senior commanders were trained to issue orders that synchronized the combat power of their units by effectively planning two echelons down and thinking two echelons up. Junior leaders were expected to take decisive action, guided by the commanders intent. The synthesis of these techniques lead to a powerfully focused combat force, directed by a fast reacting chain of command that sought out enemy mistakes and took immediate and decisive advantage of them. "Divisional operations were conducted from the forward position on the battlefield. The Division Commander had his place with the group which was to

make the main effort *(Schwerpunkt)* He visited the regiments several times a day. The divisional headquarters was somewhat further back and did not change its location during operations."[10]

The essential core of the "forward command" approach is the subordinate commander's dedication to the senior commander's intent combined with independent action. The senior commander issues his orders. They are completely binding on his subordinate leaders. Subordinate leaders can change the plan, act independently and make their own decisions, if these decisions are guided by the commanders intent. Inactivity is considered criminal. Leaders are expected to think and make decisions. Any independent decisions must conform to the basic goal of the commander.

Allied propaganda often portrayed the Germans as unthinking automatons. The facts are that the soldiers of the Wehrmacht showed unbelievable initiative and excellent tactical leadership. Junior leaders were willing to take risks when risks were necessary. They consistently out-thought their adversaries. History proves that the thinking, independent minded tactical leaders of the Wehrmacht consistently outfought their opponents. That the Wehrmacht fought almost everywhere outnumbered, often in hopeless situations, and <u>never</u> disintegrated is proof of their tactical abilities. The forward command approach to command and control was a major reason for that success.

The Germans believed that the basis for command was formed by the mission and the situation. The mission consisted of what objective was to be achieved. The order to accomplish the mission

must be simple, clear and definite. The order establishes the guidelines necessary to accomplish the mission. It establishes what units are to do; not how they are to do it. " On the basis of mission and situation a decision is formed. When the mission is overtaken by events the decision must take changed circumstances into account."[11] The method of execution is deliberately not included. Subordinate commanders are trusted to come up with the "how". Mission oriented discipline is demanded. This approach substitutes control for guidance and trust. If the subordinates abilities did not meet the challenge of the situation, or if the situation required a more experienced head, the senior commander was expected to take command of the subordinate unit and achieve decisive action. The bond between commander and subordinate was such that the senior commander's intervention was not looked upon as a lack of trust but merely as his prerogative to take command at the critical place and time. The trust, therefore, needed to be two sided.

The German Concept of Mission Tactics

The key contribution of the Prussian General Staff to the development of the orders process was in the development efficient application of a command and staff system that operated on the basis of less information. The Germans developed this system, called mission tactics, as the philosophy for command and control of modern armies. Mission tactics were employed by the

German and Prussian armies since the time of Frederick the Great. "Moltke himself inserted in the draft of a new tactical manual for senior commanders the following lines:

> A favorable situation will never be exploited if commanders wait for orders. The highest commander and the youngest soldier must always be conscious of the fact that omission and inactivity are worse than resorting to the wrong expedient. [12]

Mission tactics, or ***Auftragstaktik*** (as it became known only after World War II), is the time honored Prussian tradition of trusting the commander on the ground to make the right tactical decision based upon the overall guidance of his superior officer. Mission tactics are "more than a method of giving orders, actually more akin to a habit of thought...Usually the commander would provide only a single statement about the operation...the job of working out the details was left wholly to the subordinate commander without supervision."[13] An excellent example of this philosophy is expressed by Field Marshall Erich von Manstein in his book "Lost Victories:"

> It had always been the particular forte of German leadership to grant wide scope to the self-dependence of subordinate commanders -- to allot them tasks which leave the method of execution to the discretion of the individual. From time immemorial -- certainly since the elder Moltke's day -- this principle has distinguished Germany's military leadership from that of other armies. The latter, far from giving the same latitude to subordinate commanders on the tactical plane, have always tended to prescribe, by means of

> long and detailed directives, the way orders should actually be carried out or to make tactical action conform to a specific pattern. on the German side this system was considered a bad one. It would, admittedly, appear to reduce the risk of failure in the case of a mediocre commander. Yet it only too easily leads to the executant's having to act against the exigencies of the local situation. Worst of all, in its preoccupation with security it waives the opportunity that may occur through the independent action of a subordinate commander in boldly exploiting some favorable situation at a decisive moment. the German method is really rooted in the German character, which -- contrary to all the nonsense talked about 'blind obedience' -- has a strong streak of individuality and -- possibly as part of its Germanic heritage -- finds a certain pleasure in taking risks. The granting of such independence to subordinate commanders does, of course, presuppose that all members of the military hierarchy are imbued with certain tactical or operational axioms. Only the school of the German General Staff can, I suppose, be said to have produced such a consistency of outlook. Nevertheless, there are plenty of occasions when the senior commander in the field is faced with the problem of whether or not to take a hand in the operations of the armies or other formations under his command. The more complex the situation and the smaller the forces with which he has to manage, the more often is he tempted to meddle in the business of his subordinates.[14]

The essential core of mission tactics, is the subordinate commander's dedication to the senior commander's intent combined with independent action. The senior commander issues his orders. They are completely binding on his subordinate leaders. Subordinate leaders can change the plan, act independently and

make their own decisions, if these decisions are guided by the commanders intent. Inactivity is considered criminal. Leaders are expected to think and make decisions. All decisions must conform to the basic goal of the commander.

The concept of mission tactics translated the decentralization of decision to the lowest tactical level. Moltke recognized the criticality of "independent decision on the part of subordinate commanders," [15] and made this a responsibility of command. Moltke's "lowest soldier" was expected to seize the initiative. The following quote from Field Marshall Manstein, concerning his account of the winter campaign in Southern Russia in 1942 - 1943, is an excellent case in point: "The reason why we succeeded, despite a series of crises, in mastering the tasks already outlined is that the army and the army group staffs adhered to two well established German principles of leadership: (I) Always conduct operations elastically and resourcefully; (II) Give every possible scope to the initiative and self-sufficiency of commanders at all levels." [16]

The Germans believed that the basis for command was formed by the mission and the situation. The mission consisted of what objective was to be achieved. The order to accomplish the mission must be simple, clear and definite. The order establishes the guidelines necessary to accomplish the mission. It establishes what units are to do; not how they are to do it. The method of execution is deliberately not included. Subordinate commanders are trusted to come up with the "how". Mission oriented discipline

is demanded.

This approach substitutes control for guidance and trust. If the subordinates abilities did not meet the challenge of the situation, or if the situation required a more experienced head, the senior commander was expected to take command of the subordinate unit and take decisive action. The understanding between commander and subordinate was that the senior commander's intervention was his natural prerogative. The trust, therefore, had to be two sided.

Mission tactics emphasize the commander's intent. This intent guides all future decisions by the subordinate commander. "The German Army used mission statements...in the form of the commander's intent...The commander then assigned tasks *(Auftrage)* to subordinate units to carry out his and his superiors intent. The subordinate commander decided upon a specific course of action which became the resolution (Entschluss)" [17] The Wehrmacht viewed mission tactics are the preferred method of waging maneuver warfare.

The goal of mission tactics is to define the parameters of the mission (who, what, when and why) and leave the "how" up to the subordinate unit leader. Mission tactics "emphasizes a thought process. It is a process of seeing your options, creating new options, and shifting rapidly among those options as the situation changes.

Mission tactics require a streamlined command and control system that employs mission type orders. "The order given by a

commander is the expression of his value as a soldier. The order achieves its purpose in the best and quickest way if it is brief and clear."[18] Mission type orders are designed to speed up the decision-reaction cycle. When decisions are made quickly, at the point of execution, battle opportunities can be taken advantage of as they occur without loss of time. Time is always critical and mission type orders save time. An excellent example of this was stated by Generalmajor F. W. von Mellenthin, concerning the World War II by the commander of the 11th Panzer Division, General Balck:

> The command style and staff functioning that contribute most to maneuver warfare and mission oriented tactics are characterized by the application of mission-oriented orders to combat. The axiom of the 11th Panzer Division in 1943 was "night marches save lives. Orders were **always issued verbally.** The division commander, General Balck, made his decision for the next day during the previous evening, and he gave the necessary orders verbally to his regimental commanders **on the battlefield.** Then he returned to his main headquarters and discussed his appraisal of the situation and his intentions with the chief of staff of the 48th Panzer Corps. If the latter approved, the regiments were sent the radio messages "no change," and all was done according to plan. If there were any fundamental changes, the **division commander visited the regimental commanders during the night and gave the necessary orders personally and verbally.** [19]

End Notes Annex A

[1] Michael Howard, The Franco Prussian War, (London: Rupert Hart-Davis, 1961), p. 23.

[2] Ibid., p. 23.

[3] Bryan Perrett, Knights of the Black Cross, (New York: St. Martin's Press, 1986), pp. 11 - 12.

[4] Sir B. H. Liddell Hart, Strategy, (New York: Praeger Publishers, 1967), p. 205.

[5] Perrett, p. 6.

[6] Ibid., p. 19.

[7] Battelle Columbus Laboratories, interview by Generalmajor F. W. von Mellenthin, Armored Warfare in World War II, Conference Featuring F.W. von Mellenthin German Army May 10 1979, (Columbus, Ohio: Battelle Columbus Laboratories, 1979), p. 6. Hereafter listed as Battelle.

[8] LTC Mountcastle, Command and Control of Armor Units in Combat, Military Review, November 1985, p. 29.

[9] Generalfeldmarschall Albert Kesselring, Manual for Command and Combat Employment of Smaller Units (Based on German Experience in World War II), (originally prepared by the Chief Historian, Headquarters European Command United States Army, on 17 July 1952), p. 12.

[10] Battelle, p. 26.

[11] Martin van Crevald, Fighting Power, German and U.S. Army Performance, 1939-1945, (Westport, Connecticut: Greenwood

Press, 1982), p. 37.

[12] Colonel (U.S.A. Ret) T. N. Dupuy, A Genius for War, The German Army and General Staff, (Englewood Cliffs, N.J.: Prentice Hall Inc.),1977.
p. 116.

[13] The success of ***Auftragstaktik*** rests on the knowledge by the subordinate of the higher commander's concept of operations and objectives. The subordinate is expected to choose sensible courses of action which contribute to the desired outcome within the framework of the overall scheme of maneuver. There are several ways to achieve this kind of understanding. One is to clearly explain the commander's intent and another is to have such a long association together that "second guessing" becomes natural. Success is largely determined by a mutually understood doctrine, education, and trust. The dependence on trust is not a matter of faith but an implicit understanding derived from education and training. (Antal)

Battelle Columbus Laboratories, Translation of Taped Conversation with Lieutenant General Heinz Gaedcke, 12 April 1979, (Columbus, Ohio: Battelle Columbus Laboratories, November 1979), p. 5.

[14] Field Marshal Erich von Manstein, Lost Victories, ed. and trans. by Anthony G. Powell, (Novato, California: Presidio Press,1958), p. 383.

[15] Walter Goerlitz, History of the German General Staff, 1657-1945, trans by Brian Battershaw, (New York: Praeger, 1953), p. 75.

[16] Manstein, p. 382.

[17] Robert J. Walters, Order out of Chaos, A Case Study of the Application of Auftragstaktik by the 11th Panzer Division during the Chir River Battles, 7-19 December 1942. (Monterey, California: Naval Postgraduate School, March 1989), p. 6.

[18] Kesselring, p.13.

[19] Battelle, p. 84. The quote below from the same source further illuminates this point:

"Orders were exclusively verbal within the Panzerdivision. Balck made his decision for the next day during the evening and he gave the necessary orders verbally to his regimental commanders on the battlefield; then he returned to his main headquarters and discussed his intention with the Chief of Staff of the 48th Panzerkorps over the phone. If approval was obtained, the regiments were sent a wireless message: "No change", and all the moves were carried out according to the plan. If there were fundamental changes, the Division Commander visited all of his regiments during the night and gave the necessary orders, again verbally. Divisional operations were conducted from the forward position on the battlefield. The Division Commander had his place with the group which was to make the main effort (Schwerpunkt). He visited the regiments several times a day. The divisional headquarters was somewhat further back and did not change its location during operations. There, information was collected and collated, supplies were handled, and reinforcements sent on their way." p. 26.

ANNEX B

The Development of the Soviet Tactical Orders Process

History plays an important role in the development of the Soviet tactical orders process. From the victories of the Second World War, the Soviet Army entered the cold war era. Confident with their performance, the new leaders of the Soviet Army, set out to sharpen the Soviet sword. The tactical orders process that emerged during the "Great Patriotic War" is the direct result of the lessons learned from combat with the Wehrmacht. This approach is composed of three elements; the scientific approach of "Marxism - Leninism," the Soviet concept of "troop control," and the consistent belief in "detailed orders tactics."

The Scientific Approach of "Marxism - Leninism"

There are great differences between the Soviet and Western view of the world. The differences between Western military thought and the Soviet perception of war are just as great. A major weakness that most Westerners experience in trying to understand the Soviet command and control process is the inability of most observers to think about the subject from the Russian viewpoint. The Soviet tactical orders process cannot be understood without first understanding the importance of the impact that Marxist - Leninist thought has had on the Soviet

military. A classic example of this difference was given by former Soviet Army Colonel Aleg Penkovsky in 1965:

> One thing must be clearly understood. If someone were to hand to an American general, an English general, and a Soviet general the same set of objective facts and scientific data, with instructions that these facts and data must be accepted as unimpeachable, and an analysis made and conclusions drawn on the basis of them, it is possible that the American and the Englishman would reach similar conclusions -- I don't know. But the Soviet general would arrive at conclusions which would be radically different from the other two. This is because, first of all, he begins from a completely different set of basic premises and preconceived ideas, namely, the Marxian concepts of the structure of society and the course of history. Second, the logical process in his mind is totally unlike that of his Western counterparts, because he uses Marxist dialectics, whereas they will use some form of deductive reasoning. Third, a different set of moral laws governs and restricts the behavior of the Soviet. Fourth, the Soviet general's aims will be radically different from those of the American and the Englishman. [1]

The influence of Marxism - Leninism on the Soviet tactical orders process is pervasive. "The scientific approach of Marxism, for instance, leads to insistence that to every problem there is a 'right' answer." [2] Inundating the entire society, Marxism - Leninism attempts to establish a blueprint for every Soviet decision. Focussing on a scientific answer for every problem in life, Marxism - Leninism employs mathematics and the quantification of information to aid in the determination of the

correct decision.

> "Soviet life is permeated by the misapplication of mathematics. Norms, models and stereotypes crowd the corridors of power, flourish in the factory, and clutter the command vehicle of the military leader - not to mention his mind. The underlying aims of this approach are impeccable - to save time, to keep the commander fully briefed, and to free his mind of quantifiable matters so that he can focus his attention on the imponderables which call for subjective value judgments." [3]

The Soviet approach to the tactical orders process is, not surprisingly, extremely scientific. The capacity for "foresight" is strenuously affirmed in Marxism-Leninism. "...the High command stresses the requirement for a 'complex approach,' a major meaning of which is 'to neglect nothing'." [4] It is a system that is totally based on gathering and processing enough information to make a "correct," or optimal decision. It is a method driven by requirements to justify decisions. "Foresight is not simply the ability to guess the course of events. It supposes an intense knowledge of the nature of contemporary battle, a comprehensive accounting of the factors that have an affect on its development and on the basis for forecasting the enemy's assumed operations, and also the ability to find the proper course and take countermeasures in a timely manner." [5]

The scientific approach has led to the development of "laws" and "norms" that must guide every decision. "The art of war, as a most important component of military science, reflects the objective laws of armed conflict, and its theory is scientific. Therefore, foresight of the course of development of wars,

operations, and engagements is also scientific." [6] The emphasis is on logical, mathematical methods to speed up the decision making process. "All combat actions,' a German commander recalls about his Soviet counterparts, 'were preceded by plans...which were to guarantee success with the certainty of arithmetic." [7] This process is interested in the "search for the new and best means of routing the enemy and successful accomplishment of the mission." [8] The reliance on arithmetic to predict combat actions reflects the scientific approach of Marxism - Leninism to the Soviet orders process.

Marxist - Leninist methodology is viewed as a, "powerful means of scientific foresight and penetration of the essence of the phenomena of war." [9] The Soviets believe that mastering the techniques of this process arm the commander with a logical method of predicting the outcome of battle. To apply "Foresight" to combat, the commander must calculate the quantitative effects of the actions of the enemy, the results of actions of friendly forces, and the ultimate results of the engagement.

The result is that the scientific, "Marxist - Leninist's approach" to war drives the desire to quantify the commander's decisions. The point of the decision making process is to arrive at "correct" decision faster than the enemy. Great effort has been expended to assist the commander with decision aids in the form of nomograms, look up charts and "correlation of forces" equations. This desire to quantify combat leads to a need to control friendly forces precisely and to foresee every eventuality. With each eventuality foreseen, the commander can change plans quickly and

execute branch plans without hesitation. In this manner, the Soviets can achieve remarkable flexibility in combat operations. Emphasizing the control of their forces, the scientific approach minimizes the handicaps of poorly trained and inexperienced tactical level leadership.

To foresee every eventuality is clearly an impossible task. It becomes even more impossible if the enemy has the initiative and you are reacting to his moves. The Soviets have long believed that success depends on keeping the initiative and making the enemy react to Soviet moves. The operational concepts of the Soviet Army have, therefore, stressed the offensive. "...It is clear,too, that the key to their operational concept is the maintenance of "tempo". In order to sustain this, two principal criteria need be satisfied; firstly, there must be effective troop control at every level and, secondly, sufficient time must be allowed for planning at every layer of command without involving long delays, which would result in the sacrifice of operational impetus." [10]

Troop Control

The Soviet approach to command and control of combat forces is explained by their term "troop control." The basic premise behind troop control is that it maximizes unit efficiency in the accomplishment of assigned missions. "Effective control and the associated reduction in planning time requirements are enough, the Soviets say, to give one of otherwise equal opponents, at least a 2:1 advantage in combat." [11]

The Soviets view control as an information process. The

basis for control is the commander's decision. Troop control consists of the activities of commanders, staffs, political officers and others for maintaining the readiness and fighting efficiency of the troops, preparing operations and combat actions, and providing leadership during the execution of missions. The 1980 edition of the Soviet Military Encyclopedia defines Troop control as follows:

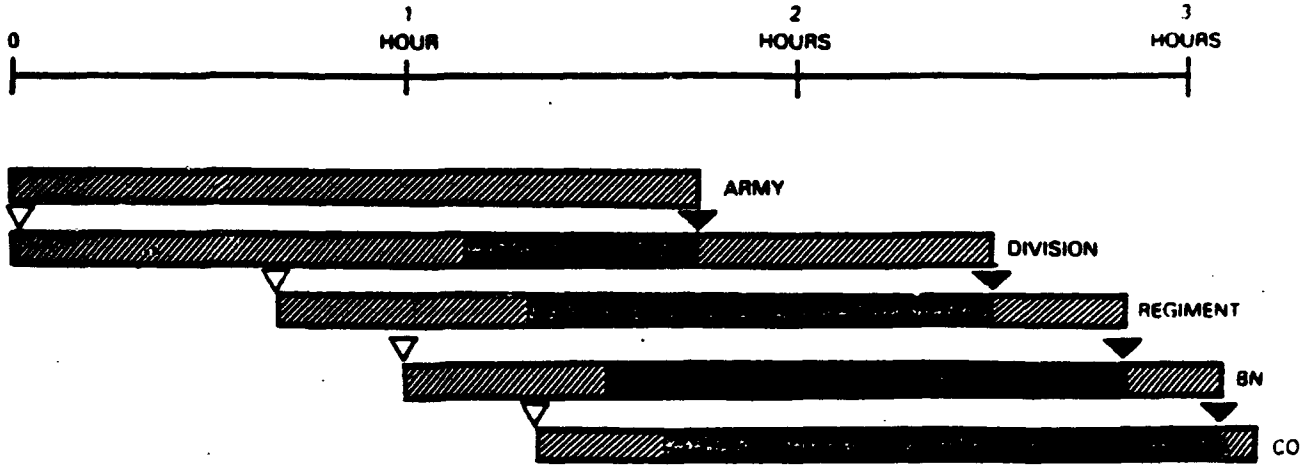
> Troop control is the work of commanders, chiefs, staffs, political organs, service and other control elements in support of combat readiness and the fighting ability of troops, preparation for operations and combat operations, and their direction during the accomplishment of the assigned missions. The control process includes:
> (1) continuous receipt, collection, study, representation, and analysis of situational data;
> (2) decision making;
> (3) tasking subordinate troops with missions:
> (4) planning operations (tactical actions);
> (5) organizing and maintaining coordination;
> (6) preparing troops and staffs for combat operations and their direct guidance;
> (7) organizing and carrying out measures dealing with political work and with all types of combat - operation support;
> (8) organizing the monitoring of and assistance to subordinate commanders, staffs, and troops. [12]

The Soviets believe that their Troop Control system gives them a high degree of flexibility and a marked advantage over their western opponent. The basic purpose of Troop Control is to help the Soviet commander make a decision and then, using that decision, help him develop a plan that has a high probability of

mission success in the face of a great number of uncertainties. Quick, correct decisions are demanded if a high tactical and operational tempo is to be maintained.

Troop Control answers this problem by making it possible is to implement a good plan fast. Mathematical models serve as the medium for measuring consistency with the Soviet laws of war and to assist the commander in making speedy and correct decisions. "Thus, if ***upravlenie voiskami*** (troop control) in this sense means "battle management", it will be profoundly influenced by the second prerequisite affecting operational tempo, namely the time factor in planning,..." [13]

The Soviets place a great emphasis on time planning and estimate the time by which the decision must be executed at the beginning of each decision cycle. "Decreasing the time required to make sound decisions in battle, represents the thrust of Soviet improvement efforts in the control process." [14] The Soviets hope to obtain a short decision making cycle by the employment of strict time norms to the development of operations orders. At Battalion level, for instance, a Soviet battalion commander is expected to issue his order in one hour and twenty minutes after the receipt of his higher commander's instructions. Soviet officers are expected to maintain these norms as a prerequisite for effective troop control. The standard time sequence for the tactical orders process for selected Soviet units, as found in Soviet Army Operations, dated April 1978, is shown in Figure B-1.



WARNING ORDER: Information on impending action, directives on time of readiness, task organization, times for execution, support organization, and logistical actions required to be ready for the attack

COMBAT ORDER

ACTIVITIES: Situation estimate, mission content, plan of action, decision, organization for combat

ACTIVITIES: Preparation of weapons and equipment, terrain orientation, reconnaissance, and accomplishment of other measures to be ready for the attack

TIME SEQUENCE OF ORDERS, PLANNING, AND PREPARATORY ACTIVITIES

Figure B-1

The first decision the Soviet commander makes is selection of the proper decisionmaking and planning process that will give him the best timely results. There are three distinct styles of decisionmaking in the Soviet Troop Control system; 1) Decision by elements of the situation, 2) Decision by elements of the decision, and 3) Executive decisionmaking.

The "Decision by Elements of the Situation" is used when time is plentiful. This style involves the analytical evaluation of all reasonable alternatives. This process requires the most time and, potentially, provides the best solutions. An added benefit is that an optimal solution can be achieved by a less trained staff using the Decision by Elements of the Situation style.

The "Decision by Elements of the Decision" is used when time is short. This style involves a directed search through the most likely alternatives. It requires more experience of its users and is likely to produce more expedient solutions.

"Executive Decisionmaking" is used when time is critical. This style is employed to make a decision during combat, when there is little time for a detailed analytical approach. It requires extensive experience of its users to arrive at the "optimal" solution and is used most often as an immediate reaction to a new situation.

The Soviets have spent an enormous amount of effort in the past thirty years to speed up the troop control process. The past decade has seen much attention paid to battle procedure,

particularly aimed at speeding up the control sequence. Simultaneous planning, often called parallel or concurrent planning, is the key watchword in recent Soviet journals to describe methods to speed up the flow of information from the staff to the commander. Parallel planning emphasize simultaneous activity throughout the chain of command. This is accomplished by use of warning orders and combat drills. "Combat warning orders are becoming widespread. These not only contain instructions on preparing troops for combat operations, on the nature of such operations and their direction, but also examples of the combat mission which, and this must never be forgotten, must be carried out directly on the battlefield." [15] This "greatly reduces the overall time factor and increases efficiency. Simultaneous planning, however, relies upon intelligent anticipation and excellent, uninterrupted communications, both of which become important elements in the C^3 process. [16]

For years the Soviets were incapable of implementing Troop Control as precisely and as quickly as they wanted to. The chaotic, quick changing, tactical situations of modern war represented an environment that would directly oppose their attempt to control their forces in time to make the critical decisions. It became apparent by the the mid-1960s that the "accepted method of troop control, in the sense of what we in the West might term "battle procedure", were inadequate to cope with the speed and complexity of the modern battlefield. At this stage the state of Soviet computer art had not been developed to the point where an upward-compatible computer system suitable for military use

on the battlefield was a feasible proposition..." [17]

The computers of the 1990s, however, have changed Soviet dreams into reality. Computerization is now a major goal for the Troop Control system. "The technical heart of this algorithmic modus vivendi is the computer, linked to improved automated communications equipment, which facilitates the whole business of data collection, processing, classification, storage and dissemination." [18] Soviet commanders are now aided by a new series of battlefield computers, the DZ-1004 for example, comparable to an IBM personal computer, to solve tactical problems at Regimental level. At lower levels, where computers are still impractical, the Soviets arm their officers with nomographs and look up charts. The point is to aid the decision maker by making the calculation of battlefield factors a simple, quick process. As John Hemsley state in his book Soviet Troop Control, The Role of Command Technology in the Soviet Military System:

> ...in order to sustain an operational or tactical temporal advantage, the command process is only completed by feedback in the form of what is called the Intelligence/Decision/Action (IDA) cycle. Given an effective IDA advantage, fewer resources are required to prevail over a given opponent with an IDA inferiority. The latter will find himself forced to respond to events which are being dictated by the side which holds the greater initiative and, therefore, by implication is more likely to be in position to change the tactical situation. Soviet military thinkers understand this only too well, since they have long held that it is density -- the ratio of force to space -- which has become the key variable influencing the

rate of advance. The greater the quantity of force in a given area the slower the movement, and conversely with a low force - to - space ratio the battlefield becomes granular rather than linear, fluid instead of static.

This view accords with their current operational and tactical concept, although as we have seen, it conflicts to some extent with their principle of centralism. Centralism subjects troop control and leadership to maximum organization and discipline, especially in a situation which calls for the more orthodox and traditional methods of leadership from the front. In theory, however, ADP [Automatic Data Processing] and associated computer techniques can shorten the IDA cycle, and the Soviet Armed Forces are committed to achieve an IDA advantage by developing the use of ADP and cybernetics within the framework of its highly centralized command system." [19]

The Soviet system of Troop Control was a natural product of the bureaucratic Soviet society that emphasizes exaggerated planning and the uninterrupted control of almost every aspect of an individual's existence. The Troop Control system is designed to maintain the direction of the drive and continue unceasing momentum of the thrust by scientifically aiding the commander to determine "optimal" solutions faster than his opponent can respond to them. It is the Soviet answer to get inside the enemy's decision cycle.

Detailed Orders Tactics

The Soviet war-fighting style is aptly described by the German military term ***Befehlstaktik,*** or orders-oriented tactics. The Troop Control system is orders-intensive and

orders-dependent. The detailed plan is the basis for all decisions. Meticulous detail is employed in developing the plan. Variants of the plan are created to allow flexibility. "Execution coordination is accomplished primarily by planned, time-space phasing of units' actions." [20] This orders intensive process is designed to maintain the tempo of the attack, to gain a time advantage over the enemy and to abolish inaction.

The Soviets recognize tempo as the crucial ingredient to victory. Tempo is a product of speed over time. It is the consistent ability to act faster than your opponent. The orders intensive approach to operations maintains the tempo of the attack by synchronizing combat power and controlling the forward momentum of the Soviet force. The orders intensive approach is ideally suited to the side that begins offensive operations, especially in a surprise attack situation. By ever increasing, overwhelming tempo, the Soviets expect to launch lightening like operations that will unbalance their opponents and keep them off balance until the war is won.

Detailed battle plans characterize the Soviet approach to combat. "Divisions and lower organizations are required to fight according to a detailed battle plan which specifies the who, what, when and how for every part of their operations." [21] Time sequencing and positive control through the process of "Troop Control" maintain the commander's direction of forces in battle. Nothing is left to chance, or independent judgment. The Soviets expect their leaders to execute the plan efficiently. Improvisation beyond the letter of the order is not encouraged. "Any Soviet

officer who acts on the American premise that 'regulations are but a guide...will probably have a very short, undistinguished military career." [22]

Initiative has a different translation to the "scientific" Soviet officer. He sees initiative as the ability of sub unit commanders to execute branch plans on order. Eventualities are predetermined before hand so that the correct action can be implemented on command. "...well organized and constantly supported cooperation on the battlefield and also dependable troop control is an indispensable condition for holding the initiative." [23] As Richard Simpkin stated in his book Red Armour, the lack of initiative of Soviet tactical commanders has historically plagued the Soviet Army:

> "The Russians themselves are the first to admit their lack of flexibility. ...Again, if the talents of 80 per cent or so of Soviet officers are as limited and stereotyped as one is led to suppose, and the quality of NCOs as poor, standard procedures reduced to easily taught drills may well be the best answer. ....control is exercised by rigid imposed discipline. The plethora of field service regulations, SOPs, norms and conceptual models leaves little scope for creativity. ....The penalties for commanders who fail in war are swift and extreme; a failure attributed to non-conformity can scarcely make them more extreme but will make them swifter and surer. Those Western commentators who reckon that the Soviets want an anthropoid automaton in every saddle could well be right. [24]

This attitude was prevalent during World War II and still plagues the Soviet Army today. It is the natural product of the

history, organization and technical capabilities of the Red Army. Positive control demands continuous communications. One of the limiting factors during the Second World War was the capability of the tactical communications systems and the reluctance of Soviet officers to report bad news. This problem is still a major concern of the Soviet Army today. As Richard Simpkin states in his book Race to the Swift, Thoughts on Twenty-First Century Warfare:

> Just as embryonic were the kind of communications needed to control mobile operations. The communications complexes with which the Red Army ended the war, employing up to six major nets in an army headquarters, were the outcome of lessons learnt the hard way. This lack of the physical means of troop control compounded the two-pronged psychological problem that plagued the Red Army then as it does the Soviet Army today -- the run-of-the-mill Russian officer's tendency to do nothing until not just told to but actively prodded; and his understandable fear of reporting an adverse situation lest he be held to blame for it. As the wastage rate among divisional and higher formation commanders shows, the only way of achieving any flexibility at all was forward command of the most extreme kind. [25]

The Soviet command style, therefore, may be at a disadvantage in a fast paced, mobile war, where events do not go according to plan. The synchronization of combat power will depend on the mental agility of junior leaders to seize and retain the initiative in an adverse command and control environment. "On this scale, advanced electronics evidently provide one of the three planks on which "detailed-order tactics" rest. Another is, naturally, detailed orders issued in advance. A third, much beloved

of the Americans too, is the standing operating procedure or SOP." [26]

Soviet commander's are extremely suspicious of inactivity. Such inactivity wastes time and disrupts the time-table upon which detailed orders tactics are based. "Attributing to his subordinates - to human nature - a penchant for wasting time, the commander will be imbued with the conviction that any lack of economy or accuracy with regard to time risks failure in battle." [27] Trained to maintain momentum, a Soviet commander "worries about the inclination of units, down to the smallest, and even of individual fighters, to go 'warring by themselves'; such worries may also be due to fears that comrades and 'neighbors' may let one down by lack of skill or will." [28] Battle plans, therefore, may be pushed through in order to maintain action, the planned attack speed, and the appropriate tempo.

Stopping, and waiting for instructions in battle is viewed as a criminal loss of valuable time. The commander "...will surmise that there are always 'unutilized reserves' of time, and be intent upon procuring a 'reserve of time' for use in case things go wrong or not anticipated. Any time lost that could have been saved is a gift made to the enemy that he will use against us; any time saved is a resource of which we deprive the enemy in his defense against us or in his attack upon us." [29] An American planner would plan for uncertainties based upon his best estimate of the probabilities for success and failure. The Soviet planner copes with these same uncertainties by building a surplus of resources into his plan. Whenever possible the Soviet planner adds 'reserves of time' into

the plan to overcome the friction that will oppose the smooth functioning orders intensive process under which he operates.

The key ingredient to maintaining the tempo required for tactical success, therefore, is maximizing the use of available the time. "Soviet military art was developed on the basis of Leninist instructions that 'procrastination is like death' in armed conflict....The importance of the time factor in battle is constantly increasing and has a direct correlation to the combat capabilities of forces...the desire to win time must permeate combat operations at all levels and in all spheres, from the receipt of the combat mission to the final triumphal round." [30]

The Soviets recognize the dilemma between decentralized battle initiative and centralized control. Recent Soviet journals have stressed the virtue of initiative at all echelons of command. The authoritative military magazine, International Defense Review reported the following information on this issue in 1985:

> Soviet theorists currently stress the importance of centralized operational level control but decentralized battle management (i.e. at divisional level and below). Their reasoning is undoubtedly sound, but the practice often seems to fall short of theory, especially with units and subunits. Tactical commanders still tend to overload themselves with unnecessary and indeed counter-productive, work and to interfere with the minutiae of their subordinates' handling of their commands. This is hardly surprising, for commanders are held personally responsible for the failure of their subordinates, and the penalties for failure are severe in the Soviet system. For their part, regimental and battalion commanders are fearful of the consequences of

> independent action. They therefore tend to adhere rigidly to the scheme of maneuver laid down by their superiors, even when the development of the battle has rendered it inappropriate. Alternately they will often refer their problems upwards and wait passively for fresh orders, rather than risk the consequences of exercising initiative." [31]

The Soviets appear to have a natural affinity bureaucracy and centralization. Without a corresponding change in Soviet society, the switch to decentralized battle management will be difficult to accomplish within the foreseeable future. The Soviet desire for scientific certainty, their penchant for information gathering, and their emphasis on detailed planning demands tight and effective centralized control. Richard E. Simpkin, in his book Human Factors in Mechanized Warfare, believed that the switch to decentralized battlefield tactics, a move closer to the mission tactics side of the spectrum, will be impossible for the Soviet Army. Simpkin states:

> [The] "...command and control system to which the Soviets seem to be moving could prove to be a critical weakness in the capability of their mechanized maneuver force. ...I would describe this as "detailed-order tactics by rear command." It is not difficult to describe or to envision. In Soviet high intensity operations the highest tactical level is probably army (formerly corps), with front (in western terms "army group) as both the operational level and the operational/strategic link. In this event there are five, maybe six, levels of command between the army commander and the vehicle or maneuver squad commander. Despite this, the low staffing levels of Soviet headquarters; the enormous effort going into the provision of a sophisticated

communications and data transmission system (at least from battalion upwards); the doctrine that seems to be coming out on top from the present controversy; and the concern over lack of creative command talent among even hand-picked Soviet officers all add up to an image in which the army commander uses a television monitor and a computer terminal to move individual tanks from one piece of cover to the next." [32]

End Notes Annex B

[1] J.D. Douglass, Soviet Military Strategy in Europe, (New York: Pergamon Press, 1980), p. 2.

[2] Richard E. Simpkin, Red Armour, (New York: Pergammon-Brassey's International Defense Publishers, 1984), p. xv.

[3] Ibid., p. 27.

[4] Nathan Leites, Soviet Style in War, (New York,Crane, Russak and Company Inc., 1982), p. 154.

[5] Col Gen Grinkevich, Ground Forces Chief of the General Staff,"The Time Factor in Battle" Vooyennyy Vestnik No. 11), (Moscow, Nov 86), p. 3.

[6] Colonel L. S. Semeyko, trans CIS Multilingual Section The Foresight of the Commander in Combat, (original published in Moscow, 1966: Revised and processed for distribution by the Soviet Affairs Publications Division , Directorate of Soviet Affairs, Air Force Intelligence Service, National Defense Headquarters, Ottawa Canada December 1986) p. 1.

[7] Leites, p. 346.

[8] D.A. Ivanov, V.P. Savel'yev, and P.V. Shemanskiy, Fundamentals of Tactical Command and Control, (Moscow: 1977), p. 184. Hereafter listed as "Ivanov."

[9] Semeyko, p. 2.

[10] John Hemsley, Soviet Troop Control, the Role of Command Technology in the Soviet Military System, (New York: Pergamon Press Inc., 1982), p. 153.

[11] Defense Intelligence Agency, Soviet Troop Control - Planning and the Battlefield Decision Process, (1986), p. 31.

[12] Soviet Military Encyclopedia, Vol 8, (Moscow:1980), p. 203.

[13] Hemsley, p. 155.

[14] Defense Intelligence Agency, p. 8.

[15] Grinkevich, p. 4.

[16] Hemsley, p. 156.

[17] Ibid., p. 156.

[18] Ibid., p. 174.

[19] Ibid., pp. 174-174.

[20] Hugo Mayer, Soviet Command and Control in the Motorized Rifle Regiment, (Fort Leavenworth: Tradoc Analysis Cmd), p. 3-3.

[21] Lieutenant Colonel William A. Walker, USA (RET), "The Deep Battle," ARMY Magazine, July 1986, p. 28.

[22] Lieutenant Colonel William P. Baxter, USA (RET), Soviet AirLand Battle Tactics, (Novato, California: Presidio Press, 1986), p. 71. For an excellent summary of the Soviet command and staff system, see chapter 3 of Soviet Airland Battle Tactics.

[23] Harriet Fast Scott and William F. Scott, The Soviet Art of War, Doctrine, Strategy and Tactics, (Boulder, Colorado: Westview Press, 1982), p. 278.

[24] Simpkin, Red Armour, pp. 70-73.

[25] Richard E. Simpkin, Race to the Swift, Thoughts on 21st Century Warfare, (London: Brassey's Defense Publishers, 1985), p. 41.

[26] Richard E. Simpkin, Human Factors in Mechanized Warfare, (New York: Pergamon Press Inc., 1983), p. 150.

[27] Leites, p. xix.

[28] Ibid., p. xxiii.

[29] Ibid., p. xix.

[30] Grinkevich, p. 2-3.

[31] C. J. Dick, "Soviet Battle Drills: Vulnerability of Strength," International Defense Review, no 5/1985, (Geneva Switzerland: Interavia S. A., 1985), p. 665.

[32] Simpkin, Human Factors in Mechanized Warfare, p. 150.

Annex C
The Development of the American Tactical Orders Process

The reputation of the American Army is one of overwhelming firepower and mass. Historically, Americans have viewed firepower as the dominate element of combat power and mass as the means to attain tactical success. Firepower and attrition have become the American way of war. Centralized command and detailed planning became critical to the success of the firepower - attrition approach. This approach can be traced to three very influential concepts; the institution of a "civilian management philosophy," a historical belief in "firepower - attrition," and the emphasis on control in the form of "detailed orders tactics." This Annex examines the development of American Tactical Orders Process.

Civilian Management Philosophy

Unlike Germany, where military militarism took on a momentum of its own, or the Soviet Union, where militarism is state induced, the United States has always looked at war as a disruption of normalcy. Since the birth of the Republic in 1776, American's have rightfully demanded tight civilian control over the military. Distrusting standing armies, America has traditionally disbanded its military forces after each major war.

"The idea that large military forces form a threat to liberty, that they endanger democracy, that they imperil economic prosperity, and that their very existence undermines peace -- all these are said to have been 'fairly constantly characteristic' of the American attitudes toward the army."[1] Robert Leckie, a World War II United States Marine veteran and historian called America the "fightingest society since the advent of modern warfare. Yet, though America can become martial, she has never been militarist."[2]

"The second World War became for American strategists an organization war, a war of corporate leadership....The committees system blossomed on the service, inter-service and international levels and brought leaders and experts together to select courses of action."[3] This organizational feat was a remarkable accomplishment in management. The success of the management approach, so eagerly adopted by the business trained officers of a quickly mobilized army, had long term ramifications:

> At the close of World War II the United States Army was the mightiest in the world.... Mass armies could be organized, maintained, and fought effectively only by leaders possessing highly developed management skills; the United States Army cultivated an officer corps with such skills through Elihu Root's General Staff and school systems and their extensions, nourished by more generalized management skills of a complex industrial society. Perhaps most important, World War II was a "gross national product war," in which sheer quantities of weapons, supplies, and transport could decisively

outweigh an enemy; America's industrial leadership fitted it preeminently to wage such a war." [4]

The U.S. Army's view to warfare, therefore, was predominantly managerial "putting far heavier emphasis on doctrine, planning and control." [5] The reason for the ascendancy of these management philosophies was the relative inexperience of the majority of troops and commanders who, civilians until yesterday, required a tremendous degree of supervision from above and the experience of an army that, traditionally assured of overwhelming material superiority, simply relied more on organization and logistics rather than on skill and fighting power.[6]

After World War II, the threatening perception of "World Communism" and the shock of limited war in Korean, forced the United States to maintain the largest standing military force in its "peace-time" history. To maintain this huge military force the United States Army copied the management philosophy that had brought success in the second World War. "To command this Army in a multifront war, as well as to administer and maintain it, demanded leadership and managerial qualities of an exceptional kind. ...The war was commanded and the Army managed by a committee system...." [7] This philosophy was based on the efficiency of the market place, and the science of business management.

This philosophy has had a profound effect on the evolution of the American military, American military leadership, and the

American approach to the tactical orders process. America "...after all was the home of Taylorism; a system of management that tried to foresee and dictate the operative's every movement with the aim of turning him into a human machine as reliable as the mechanical ones he attended." [8] In the U.S. Army the philosophy of scientific management was widely applied and became the driving force behind the development of the U.S. Army's thoughts on the tactical orders process.

The business management method to warfighting gained ascendancy in the 1960's under Defense Secretary McNamara during the Kennedy administration and held firm throughout the 1970's. The eminent military historian, Edward Luttwak explains the power of this philosophy on military decision making in his book The Pentagon and the Art of War:

> An even greater defect of the Mcnamara approach to military decisions was its businesslike "linear" logic, which is right for commerce or engineering but almost always fails in the realm of strategy. Because its essence is the clash of antagonistic and outmaneuvering wills, strategy usually proceeds by paradox rather than conventional "linear" logic.... Linear logic is all very well in commerce or engineering, where there is lively opposition, to be sure, but no open-ended scope for maneuver: a competitor beaten in the marketplace will not bomb our factory instead, and the river duly bridged will not deliberately carve out a new course. But such reactions are merely normal in strategy. Military men are not trained in paradoxical thinking, but they do not have to be. Unlike the business-school expert,

> who searches for optimal solutions in the abstract and then presents them with all the authority of charts and computer printouts, even the most ordinary military mind can recall the existence of a maneuvering antagonist now and then, and will therefore seek robust solutions rather than "best" solutions -- those, in other words, which are not optimal but can remain adequate even when the enemy reacts to outmaneuver the first approach.[9]

The impact of the civilianization of the United States Army also effected the development of doctrine and how American officers thought about war. Quantification, reams of organizational data and impressive charts and view-graphs took up most of the average officers daily existence. As the need for more data grew, the size of staffs were increased. Combining business management techniques with the traditional American theory of"mass and concentration" [10] sowed the seeds of the attrition warfare that was waged in Vietnam. "The new breed of the "system analysts" introduced new standards of intellectual discipline and greatly improved bookkeeping methods, but also a trained incapacity to understand the most important aspects of military power which happen to be nonmeasureable."[11]

The American military soon found out that it could not control the basic doctrine on how its forces were to train, fight and win. Again, Edward Luttwak:

> "We have seen how the pursuit of business-type efficiency in the placement of each soldier destroys the cohesion that makes fighting units effective;...Because tactics, the operational art of

> war, and strategy itself are not reducible to precise numbers, money was allocated to forces and single weapons according to "firepower" scores, computer simulations, and mathematical studies -- all of which maximized efficiency, but often at the expense of combat effectiveness.[12]

That the leadership of the U.S. Army allowed this philosophy to take root, over traditional military values, is evidence to the power civilianization had over the U. S. Army. "Even the code words of the business world were used; thus, we 'managed our resources,' engaged in 'personnel management' in an effort to reduce"personnel turbulence,' and always looked to 'significant savings downstream' whenever a course of action came under criticism." [13] By 1970, the United States Army was in serious trouble:

> "Headquarters in the U.S. Army habitually expend their time and energies on routine administration, seldom pushing, training, and testing themselves as they push, train, and test their troops. Perhaps it is natural for a hierarchy to act like a bureaucracy, comfortably keeping busy with day-to-day tasks that all large organizations create for themselves. Of course, headquarters work hard, but the result too often seems to be that the troops, even when inadequately trained and armed, are readier for war than the men who lead them. the implied lesson is that senior commanders and their staffs might do well to free themselves from the routine busywork of peacetime military life and to plan and carry out frequent, more realistic training exercises for themselves, involving several command levels and

arms, that will hone skills that otherwise must be bought with blood and , possibly, defeat."[14]

The adoption of the science of business management over the traditional values of military responsibility as indicated by "command" has inhibited the U.S. Army's tactical decision making capability since the early 1960's to the present. The business approach to war has led to over large staffs and bloated bureaucracies. Instead of a few well trained "iron majors" to turn to for decision making and advice, U.S. Army staffs have countless officers on numerous subordinate staffs who all share a piece in the decision process. The committee approach has come full circle and is now institutionalized. "...the officers are so 'civilianized' by their entire career experience that they are ill prepared for the brutal urgencies of combat. And the military institutions run by our civilianized officers may be more responsive to the civilian priorities of efficiency, honesty, and political obedience than to the requirements of strategy...." [15]

The other burden that this philosophy has laid around the neck of the U.S. Army is its ability to conduct decentralized command and control. "A capacity for initiative is eroded by excessive supervision. The tactical and operational abilities of individuals, and their strategic insight, are made quite irrelevant by the predominance of committee solutions, reached in overstaffed headquarters."[16] The stories of division or brigade commanders controlling squad sized units in the Vietnam war still haunt the

U.S. Army. An example of this situation is described in Arthur T. Hadley's book The Straw Giant, Triumph and Failure: America's Armed Forces:

> "In Vietnam, overcontrol led to disasters large and small. On the last day of the American involvement there, the White House was requesting tail numbers of the helicopters being used to lift the Americans off the embassy roof in Saigon. Mired in such gnat-sized details, those at the command summit had lost control over the strategic direction of American policy, while those at the bottom were robbed of initiative and lost flexibility and confidence in themselves." [17]

Historical Belief in Attrition

The American approach to war has largely been one of annihilation through superior firepower. Russel F. Weigley's The American Way of War explains the distinctly American style of warfare as accepting the Napoleonic and Clausewitzian view that annihilating the enemy's army is the key to victory. "...he would fight all the time, every day, keeping the enemy army always within his own army's grip, allowing the enemy no opportunity for deceptive maneuver, but always pounding away until his own superior resources permitted the Federal armies to survive while the enemy army at last disintegrated." [18] In this regard, General Ulysses S. Grant, epitomized the American way of war: "Find out where your enemy is. Get at him as soon as you can. Strike at him as hard as you can and as soon as you can, and keep moving on." [19]

Traditionally the advantages of the American Army were superior quantity rather than superior quality. "American warfighting doctrine for over a century has been significantly influenced by an expectation of abundant material resources, the availability of superior firepower, and a tendency toward strategies of attrition." [20] Unable to maintain large professional armies during peacetime, the U.S. Army was organized as a cadre force that facilitated the expansion into a large, quickly trained citizenry force. Coupled with plentiful resources and enormous quantities of weapons, the U.S. Army translated its philosophy of annihilation into the easily recognizable language of attrition. The advantage of numbers allowed the U.S. Army to rely more heavily on firepower, rather than maneuver; on brute force rather than skill. "The quantity of American weapons, then, overwhelmed enemies with sheer weight of firepower." [21]

The two World Wars and the Korean conflict vindicated the overall belief in the policy of annihilation through attrition. To be sure, brilliant commanders in World War II, such as MacArthur, Patton and Harmon were able to apply maneuver warfare to defeat their opponents. But these were exceptions to the general trend of victories won by firepower. An American officer observed: "We let the arty fight the war as much as possible...." [22] Artillery was the American Army's special strong suit. Fortunately for the U. S. Army, the Wehrmacht in 1944, as the German Army in 1918, was not at the peak of its own power.

With the American approach to war vindicated in World War I

and II, it is not surprising that the U.S. Army entered the Korean and Vietnam wars with a firepower oriented, attrition based philosophy. Korea ended in a tactical draw, with American firepower and the suggested use of tactical nuclear weapons the predominant factors bringing about the cease fire. In Vietnam, however, American firepower was less effective. Denied the capability of destroying the North Vietnamese in North Vietnam, American strategy was reduced to killing Viet Cong and North Vietnamese faster than they could be replaced. This proved to be an impossible task. Unable to define a strategic or operational means to win the war, other than exhaustive attrition, the war devolved into a battle to see who could outlast the other. By August 1966, the conflict in South Vietnam had evolved into a protracted war of attrition.

The war continued and the body count rose with no end was in sight. The conditions for victory had not been established. Total victory, the annihilation of the enemy in the true Clausewitzian sense, could not be accomplished due to the political limitations set by American policy. For twelve long years the U.S. Army was involved in "managing violence" to produce an efficient level of statistics of enemy killed, wounded and captured. As months of the war of attrition continued, the Army developed new tactics. Contact with the enemy was avoided. Infantry units were all but forbidden to close with and kill the enemy. Instead, infantry found the enemy and firepower eliminated him. Control was enforced by the commander, flying safely overhead, in his command helicopter.

The statistics soon took on the measure of tactical success. Units were compared in effectiveness by their success at achieving a high "body count."

> One should carefully note that while American field commanders openly admitted that they were waging a war of attrition, they winced at calling it a strategy of attrition. Attrition is not a strategy. It is, in fact, irrefutable proof of the absence of any strategy. A commander who resorts to attrition admits his failure to conceive of an alternative. He rejects warfare as an art and accepts it on the most non-professional terms imaginable. He uses blood in lieu of brains. To be sure, political considerations left military commanders no choice other than attrition warfare, but that does not alter the hard truth that the United States was strategically bankrupt in Vietnam in 1966. [23]

That firepower ruled American tactics was evident by the vast amount of artillery, naval gunfire support, fighter bombers and strategic bombers that were used in support of the ground forces. "B-52 usage, for instance leaped from sixty sorties a month in 1966 to over eight hundred monthly in 1967. When contact was made, American units, preoccupied with avoiding casualties, generally fell back into a defensive perimeter to call for air and artillery. Tactical maneuvers to roll up an open flank or strike an exposed rear were usually attempted only by the enemy."[24] In Vietnam, the Army's tactics were to locate the enemy and then obliterate him with overwhelming fire.

This firepower - attrition mindset clearly effected the methods command and control. Only a centralized, orders intensive, system of positive control could keep this awesome array of firepower aimed at the enemy and away from friendly units. This point bears important lessons for the future of the Army. As Colonel Dave Palmer wrote in his book, Summons of the Trumpet:

> "Mobility, clearly, is derived from more than physical or technological factors -- it is also a state of mind....The utter dependence on firepower represented a failure of the U.S. system of fighting in Vietnam -- a failure, to be sure, which contrarily provided success time and again. Therein, in that paradox, lies the danger for the future; a system which works is seldom scrutinized critically.... in a future conflict such colossal amounts of firepower might not be available, or the enemy may have equal strength. It has been a long time since the American army has had to cope with a foe on even terms. To enter the next war with the tactics employed in Vietnam could be bloody. or even disastrous." [25]

Tradition of "Detailed Orders Tactics."

The American emphasis on firepower - attrition has traditionally focussed commanders on detailed order tactics to maintain control. This was evident in the U.S. Army as far back as the First World War. The communications capability of the World War I tactical units was inadequate to accomplish the demands of positive control. "The only alternative, Pershing's staff reasoned,

was elaborate planning and rigidly prescribed schemes of fire and maneuver."[26]

During the the First World War the techniques of preparing and issuing orders were inadequate to the challenges of even slow paced trench warfare. The U.S. Army, like its French and British Allies, embraced the attrition style of warfare and attempted to scientifically manage their combat forces. Here the centralization of command reached its climax and long, verbose operation orders became the rule:

> "In the late war these attack orders were of many types. Early in the game, they were most complete field orders, pages of descriptive data with annexes for every arm and service. These were usually of about as much use in action as if a football coach attempted to outline in advance each play his team should use successively during the first half. But long theoretical training at Leavenworth will bring forth such orders at the start of any offensive, so you probably will receive just such an order. They are very comprehensive and complete, but everything is based on "D" day and "H" hour which, you are told, will be announced later. Simultaneous with the issuance of the attack order will be the issuance of the attached map. This will show sector boundaries, possibly lines to be reached by certain times (such as H+2 hours) and lines on which to halt and reform, etc. The usual allotment was four maps to a regiment. This meant four copies of the order and four maps (one for the colonel and one for each battalion). At Soissons there were but two maps per regiment, and what happened proved the fallacy of this distribution. As far as the order went, the two copies were sufficient, for the attack order became almost obsolete from the moment of the "jump off." The enemy failed to cooperate. He did not do as he was supposed to do, and the rest of the order became useless. [27]

World War II saw the same type of error occurring. Major General Lloyd R. Fredendall's order to his forces issued a few days before the disaster at the Kasserine Pass in North Africa is an excellent example that proves that the military education system of the U.S. Army had failed miserably, in this example, in teaching a systematic, clear and brief approach to the art of issuing combat instructions. General Fredendall's order is presented below exactly as it was written in 1943:

Headquarters II Corps
APO NO. 302
11 February, 1943

SUBJECT: Defense of FAID position.

TO: Commanding General, 1st Armored Division

1. You will take immediate steps to see that the following points concerning defense of the FAID position are put into effect:

a. Scheme of Defense: DJ KSAIRA on the South and DJ LESSOUDA on the North are the key terrain features in the defense of FAID. These two features must be strongly held, with a mobile reserve in the vicinity of SIDI BOU ZID which can rapidly launch a counterattack. Plans for all possible uses of this reserve should be prepared ahead of time. A battalion of infantry should be employed for the defense of DJ KSAIRA, and the bulk of a battalion of infantry together with a battery of artillery and a company of tanks for defense of DJ LESSOUDA. Remainder of artillery is at present satisfactorily located. It should, however, furnish its own local protection, and be prepared to shift rapidly.

b. Additional Reserves: The 1st Battalion, 6th

infantry, now under your control, should immediately send a liaison officer to HQ., CC A. Inasmuch as this Battalion will likely be employed by McQuillin should an attack in the FAID area develop, the Battalion Commander, in collaboration with McQuillin should prepare plans for the use of his Battalion. These plans should ensure rapid movement and employment of this Battalion once it has been ordered.

c. Reconnaissance: It is extremely important that reconnaissance and counter reconnaissance be conducted by you from HADJEB EL AIOUN on the North to the pass between DJ MAIZTLA (Djebel Maizila) and DJ GOULEB on the South. In this area strong listening posts should be established 24 hours a day from which raids, when appropriate, can be conducted. It is essential that this reconnaissance and counter reconnaissance link up with that now being conducted by the 1st British Derbyshire Yeomanry. The force now at McQuillin's disposal is not sufficient for the area for which he is responsible. The bulk of your 81st Reconnaissance Battalion should be used in the area HADJEB EL AIOUN-MAIZTLA-GOULEB PASS.

d. Patrols: It is vital that strong infantry foot patrols be sent forward at night from DJ LESSOUDA and DJ KSAIRA. These patrols must be offensive. They must keep track of the enemy's strength and organization. They should be especially watchful for any attempt of the enemy to debouch from the passes at night. They must take prisoners. It is also important that these patrols locate the presence of minefields, if any, in areas like the gap between DJ RECHAIB and DJ BOU DZEL (Djebel Bou Dser). The latter would , of course, be of great importance in the event we decide to capture FAID.

e. Use of Wire, AT Mines, Trip Wire, etc: I desire that you make maximum use of all available means to strengthen the positions outlined above. The

necessary material is available and should be used immediately.

f. Photography: I have instructed my G-2 to furnish you as soon as possible a photographic strip covering the area: Pass at T8358 - FAID PASS - REBOU (Ain Rebaou) - MATLEG PASS. I have asked that every effort be made to secure good pictures of the pass at T8358. FAID PASS, and MATLEG PASS.

2. I desire that a copy of this directive, together with your own comments, be sent to McQuillin.

3. You will inform me when the instructions enumerated in this directive have been complied with.

L. R. FREDENDALL
Major General U.S.A.
Commanding

[The following was written in longhand:]
In other words, I want a very strong active defense and not just a passive one. The enemy must be harassed at every opportunity. Reconnaissance must never be relaxed -- especially at night. Positions indicated must be wired and mined now.

L. R. F.

Major General Fredendall issued a directive that did not use the five paragraph field order format (or any other standard format), contained wordy and ambiguous instructions and never clearly established his intent. In his order, Fredendall directed the movement of battalions and even foot patrols -- a level of detail totally out of the realm of his span of control. The order was so bad that he felt compelled to add a postscript on the

bottom to emphasize what he had supposedly said in the body of the directive.

The first battle the Americans fought against the Wehrmacht in North Africa resulted in a humiliating defeat for the United States. Fredendall's forces took heavy casualties during four days of fighting in the Faid-Sidi bou Zid-Sbeitla area. "The Americans had lost more than 2,500 men, 100 tanks, 280 vehicles, and 30 guns." [28] "Higher commanders shirked the responsibility or lacked the knowledge to coordinate units in battle...Commander's were in general imprecise in their orders." [29] This defeat was due in part to Fredendall's sloppy and inefficient style of issuing combat instructions. He was relieved for this fiasco and replaced by General George S. Patton Jr.

General George C. Marshall, the Chief of Staff of the War Department during World War II, understood the problem facing the poor state of "orders training" in the American Army. "In France in 1918 a Division attack order was sometimes fifteen or twenty pages long. After the war, continuous efforts were made to cut down this verbosity...." Marshall goes on to say:

> It is very hard to break down a highly developed technique which had indoctrinated a great many officers as a result of trench warfare procedure.
>
> Finally in 1930 I obtained through General von Blomberg...the data on recent German maneuvers where divisional attack orders were not only brief but at times purely oral. [30]

In a letter to President Roosevelt General Marshall praised Major General Terry Allen for his succinct, clear one page division operations order issued shortly after Allen's 1st Infantry Division landed in Africa on 9 November 1942. Major General Allen's order is reproduced below:

[ORDER OBTAINED FROM: Franklin D. Roosevelt Library. Declassified]
HQ 1st Inf Div
RENAN
2210, Nov 9, 1942

FO # 3
1. Omitted

2. Div atks at 0715 Nov 1942 (See operations map scheme maneuvers and time of atk). CC B atks from S at 0730 in conjunction with 1st Div.

3. a. CT 18 see operation map.
1st Bn CT 18 follows CT 18 after mopping up around ST CLOUD.
b. CT 16 less 1st Bn, see operation map.
1st Bn CT 16 (brought forward in trucks follows in Div res).
c. Civilian snipers caught red-handed will be summarily shot.

Nothing in Hell must delay or stop this atk.

4. Attached.

5. Div CP initially follows 16th Inf.

Allen.
Maj Gen

Allen's ability to quickly issue his orders and clearly transmit his intent was essential to the rapid pace his division maintained in the attack. Allen's orders process gained his unit a time advantage that they were able to translate into surprise against the French garrison of Oran, which was debating whether to fight or surrender to the invaders. The tempo of Allen's operation was crucial to the capture of the city of Oran. Had Allen's attack slowed and had the defenders been given more time to react, French resistance could have been much stiffer and resulted in needless American casualties. As it occurred, Allen took the city two days after hitting the beach and lost only a few men to hostile fire.

Detailed orders tactics are the natural tendency of the American Army. Usually thrown together hastily and often formed into units that have not had the opportunity to develop a sense of unit cohesion and trust, the concept of detailed order tactics provides active control:

> In the past"...the professional response to the chronic American weakness in command-and - control was to plan more thoroughly, leaving as little to chance as possible. But thorough planning, with its natural deemphasis of unexpected situations (beyond the scope of contingency plans), led to rigidity and, often, heavy losses. In other words, the command-and-control weakness and its chosen professional remedy were but two aspects of a single larger problem: inadequate preparation of commanders and staffs for the real world of combat." [31]

From the defeat in Vietnam came the strong need for the U.S. Army to reassess its doctrine and come to grip with the controversy of "Attrition" verses "Maneuver" styles of warfare. The Army's answer, in 1976, was in the doctrine of "active defense." Designed to reintroduce maneuver, the tactics described by the 1976 edition of FM 100-5, Operations, continued the defensive oriented and attrition based trend of the past. "The tactical consequences of this technically centered approach were a conviction that prepared defenses were key to success, a mathematical approach to operations which stressed the importance of force ratios, and a strong implication that movement and offensive action would not succeed." [32]

The doctrine of "active defense," however did have its positive side. "Dissatisfaction with the active defense, particularly with its failure to deal adequately with forces in depth, led to a revision of the basic doctrine in 1980." [33] This revision created a rebirth in doctrinal thinking in the Army and laid the groundwork for the U.S. Army's development of a maneuver oriented warfighting doctrine called AirLand Battle.

End Notes Annex C

[1] Martin van Crevald, Fighting Power, German and U.S. Army Performance, 1939-1945, (Westport, Connecticut: Greenwood Press, 1982), p. 20.

[2] Robert Leckie, The Wars of America, Vol 2, (New York: Harper & Row, 1968), p. xii.

[3] Maurice Matloff, "The American Approach to War," in The Theory and Practice of War, ed by Michael Howard, (Bloomington: Indiana University Press, 1965), p. 239.

[4] Russell F. Weigley, History of the United States Army, (New York: Macmillan Inc, 1967), p. 472.

[5] Crevald, p. 33.

[6] Ibid., paraphrased from p. 33.

[7] Weigley, p. 473-474.

[8] Crevald, p. 39.

[9] Edward N. Luttwak, The Pentagon and the Art of War, (New York: Simon and Shuster Publication, 1985), p. 270.

[10] Matloff, p. 235.

[11] Luttwak, p. 269.

[12] Ibid., p. 269.

[13] Richard Gabriel and Paul Savage, Managers And Gladiators,

Directions of Change in the Army, (St. Anselm's College: Hawkes Press, 1979), p. 122.

[14] Charles E. Heller and William A. Stoft, America's First Battles, 1776 - 1965, (Lawrence, Kansas: University of Kansas Press, 1986), p. 331. Hereafter listed as Heller.

[15] Luttwak, p. 201.

[16] Ibid., p. 202.

[17] Arthur T. Hadley, The Straw Giant, Triumph and Failure: America's Armed Forces, (New York: Random House, 1986), p. 27.

[18] Weigley, p. 143.

[19] John Keegan, The Mask of Command, (New York: Penguin Books,1987), p. 194.

[20] Edward N. Luttwak, Strategy and Politics, (New Brunswick, Canada: 1980), pages 300-303.

[21] Weigley, p. 475.

[22] Russell F. Weigley, "The Parameters of War," Military History from the Journal of the U.S. Army War College, ed by Lloyd Matthews & Dale Brown, (Washington: Pergamon-Brassey's International Defense Publishers, 1987), p. 267.

[23] Colonel Dave R. Palmer, Summons of the Trumpet, (New York: Ballantine Books, 1984), p. 183.

[24] Ibid., p. 181.

25 Ibid., pp. 183 - 184.

[26] Heller, p. 161.

27 Lieutenant Colonel Thomas Shipley, S-2 In Action, (Harrisburg, Pennsylvania: Military Service publishing Company, 1940), pp. 70-71.

28 Heller, p. 255.

29 Ibid., p. 262.

30 General George C. Marshall, Memorandum for the President; Subject: Development of Army Operational Technique, (Washington, D.C: Department of the office of the Chief of Staff, March 17, 1943), p. 1-2.

31 Heller, p. 330.

32 LTC William Holder, "Doctrinal Development, 1975 - 85," Military Review, (Fort Leavenworth, Kansas: May 1985), p. 50-51.

33 Ibid., p. 51.

Bibliography

Battelle Columbus Laboratories, Interview by Generalmajor F. W. von Mellenthin. Armored Warfare in World War II, Conference Featuring F.W. von Mellenthin German Army May 10 1979. Columbus, Ohio: Battelle Columbus Laboratories, 1979.

Battelle Columbus Laboratories. Translation of Taped Conversation with Lieutenant General Heinz Gaedcke,12 April 1979. Columbus, Ohio: Battelle Columbus Laboratories, November 1979.

Baxter, Lieutenant Colonel William P. USA (RET). Soviet AirLand Battle Tactics. Novato, California: Presidio Press, 1986.

Bolger, Dan P. Dragons at War, 2-34th Infantry in the Mojave. Novato California: Presidio Press, 1986.

Center for Army Tactics, Truppenfuhrung (1933) Fort Leavenworth, Kansas: U.S. Army Command and General Staff College, 30 January 1989. 1989 transcript of 1936 translation of Truppenfuhrung [1933]

Clarke, General Bruce C. Guidelines for the Leader and the Commander. Harrisburg: Stakpole Books,1963.

Combined Arms Training Notes, Fort Leavenworth, Kansas: Winter 1984.

Crevald, Martin van. Fighting Power, German and U.S. Army Performance, 1939-1945. Westport, Connecticut: Greenwood Press, 1982.

Czege, Colonel Huba Wass de, "AirLand Battle Doctrine," Art of War Colloquium, The US Army's Doctrinal Reforms. U.S. Army War College, June 1983.

Defense Intelligence Agency. Soviet Troop Control - Planning and

the Battlefield Decision Process. 1986.

Department of the Army Pamphlet, Small Unit Actions during the German Campaign in Russia No. 20-269. Washington D.C: Government Printing Office, July 1953.

Department of the Army Pamphlet, Russian Combat Methods in World War II. Washington, D.C: Department of the Army, 1950.

Dick, C. J. "Soviet Battle Drills: Vulnerability of Strength," International Defense Review, no 5/1985. Geneva Switzerland: Interavia S. A., 1985.

Donnelly, C. N. "The Development of Soviet Military Doctrine," International Defense Review, no 12, 1981.

Douglass, J.D. Soviet Military Strategy in Europe. New York: Pergamon Press, 1980.

Dragunskiy, D.A. et al, ***Motostrelkovyy (Tankovyy) Batalyon V Boyu*** The Motorized Rifle (Tank) Battalion in Combat part 1. Moscow: 7 Apr 1986.

Dunnigan, James F. How to Make War, A Comprehensive Guide to Modern Warfare. New York: William Morrow and Company, 1982.

Dupuy, Colonel (U.S.A. Ret) T. N. A Genius for War, The German Army and General Staff. Englewood Cliffs, N.J.: Prentice Hall Inc. 1977.

During, Major Fred (ed) Captain G.B. Guenther, (Associate ed) Review of Military Literature, The CGSC Quarterly, Vol XV, Fort Leavenworth, Kansas: 1935.

English, Lieutenant Colonel J.A., Major J. Addicott and Major P.J. Kramers, The Mechanized Battlefield, A Tactical Analysis, Washington: Pergamon - Brassey's International Defense Publishers, 1985.

Filiberti, Major Edward J. "Command, Control and Commander's Intent," Military Review. Fort Leavenworth, Kansas: U.S. Army Command and General Staff College, August 1987.

Fuller, Major General J.F.C. A Military History of the Western World, Volume 3, From the Seven Days Battle, 1862 to the Battle of Leyte Gulf, 1944. New York: Minerva Press, 1967.

Fuller, J.F.C. Decisive Battles of the Western World, ed. John Terraine, London: Granada, 1981.

Gabriel, Richard, and Paul Savage, Managers And Gladiators, Directions of Change in the Army. St. Anselm's College: Hawkes Press, 1979.

Goerlitz, Walter. History of the German General Staff, 1657-1945, trans by Brian Battershaw. New York: Praeger, 1953.

Grinkevich, Colonel General Ground Forces Chief of the General Staff, "The Time Factor in Battle" Vooyennyy Vestnik No. 11, Moscow, November, 1986.

Hadley, Arthur T. The Straw Giant, Triumph and Failure: America's Armed Forces. New York: Random House, 1986.

Hart, Sir B. H. Liddell. Strategy. New York: Praeger Publishers, 1967.

Heller, Charles E. and William A. Stoft, America's First Battles, 1776 - 1965. Lawrence, Kansas: University of Kansas Press, 1986.

Herbert, Major Paul H. Deciding What Has to be Done: General William E. Depuy and the 1976 Edition of FM 100-5, Operations: Leavenworth Paper no. 16. Fort Leavenworth, Kansas: Combat Studies Institute, 1988.

Heisbourg, Francois The Military Balance 1988-89, London:

International Institute for Strategic Studies, 1988.

Hemsley, John. Soviet Troop Control, the Role of Command Technology in the Soviet Military System. New York: Pergamon Press Inc., 1982.

Holder, Lieutenant Colonel L. D."Doctrinal Development, 1975 - 85," Military Review. Fort Leavenworth, Kansas: U.S. Army Command and General Staff College, May 1985.

Howard, Michael. The Franco Prussian War. London: Rupert Hart-Davis,1961.

Humphrey, Maj Vernon W. "NTC Command and Control," Infantry Magazine. Fort Benning, Georgia: U.S. Army Infantry School, Sept-Oct 1984.

Ivanov, D.A., and V.P. Savel'yev, and P.V. Shemanskiy, Fundamentals of Tactical Command and Control. Moscow: 1977.

Keegan, John The Mask of Command. New York: Penguin Books,1987.

Kesselring, Generalfeldmarschall Albert, Manual for Command and Combat Employment of Smaller Units (Based on German Experience in World War II), (originally prepared by the Chief Historian, Headquarters European Command United States Army). 17 July 1952.

Leckie, Robert. The Wars of America, Vol 2. New York: Harper & Row, 1968.

Leites, Nathan Soviet Style in War. New York, Crane, Russak and Company Inc., 1982.

Lind, William S. Maneuver Warfare Handbook. Boulder, Colorado: Westview Press, 1985.

Lung, Colonel Hoang Ngoc. Strategy and Tactics. Washington D.C: U.S. Army Center of Military history, 1980.

Luttwak, Edward N. Strategy and Politics. New Brunswick, Canada: 1980.

Luttwak, Edward N. The Pentagon and the Art of War, New York: Simon and Shuster Publication, 1985.

Manstein, Field Marshal Erich von. Lost Victories, ed. and trans. by Anthony G. Powell. Novato, California: Presidio Press, 1958.

Marshall, General George C. Memorandum for the President: Subject: Development of Army Operational Technique, Washington, D.C: Department of the office of the Chief of Staff, March 17, 1943.

Matloff, Maurice. "The American Approach to War," in The Theory and Practice of War, ed by Michael Howard. Bloomington: Indiana University Press, 1965.

Mayer, Hugo. Soviet Command and Control in the Motorized Rifle Regiment. Fort Leavenworth: Tradoc Analysis Command. 1983

Mountcastle, Lieutenant Colonel John L. "Command and Control of Armor Units in Combat," Military Review, Fort Leavenworth, Kansas: U.S. Army Command and General Staff College, November 1985.

National defense University, The Joint Staff officers Guide, Armed Forces Staff College Publication 1, Norfolk, Virginia: Armed forces Staff College, 1 July 1988

Orr, George E. Combat operations C3I: Fundamentals and Interactions, Maxwell Air Force Base, Alabama: 1983.

Palmer, Colonel Dave R. Summons of the Trumpet, New York: Ballantine Books, 1984.

Patton, General George S. War As I Knew It. New York: Bantam Books,

January 1980.

Perrett, Bryan. Knights of the Black Cross. New York: St. Martin's Press, 1986.

Reznichenko, Vasilly Gerasimovich, Ivan Nikolayevich Vorobyev, and Nikolay Fedorovich Miroshnichenko. Taktika [Tactics]. translated JPRS 29 June 1988. Moscow: 1987.

Shipley, Lieutenant Colonel Thomas. S-2 In Action. Harrisburg, Pennsylvania: Military Service publishing Company, 1940.

Scott, Harriet Fast and William F. Scott, The Armed Forces of the USSR, Boulder, Colorado: Westview Press, 1979.

Scott, Harriet Fast, and William F. Scott, The Soviet Art of War, Doctrine, Strategy and Tactics, Boulder, Colorado: Westview Press, 1982.

Semeyko, Colonel L. S. trans CIS Multilingual Section The Foresight of the Commander in Combat, original published in Moscow, 1966: Revised & processed for distribution by the Soviet Affairs Publications Division, Directorate of Soviet Affairs, Air Force Intelligence Service, National Defense Headquarters, Ottawa Canada Dec 1986.

Simpkin, Richard E. Race to the Swift, Thoughts on 21st Century Warfare, London: Brassey's Defense Publishers, 1985.

Simpkin, Richard E. Human Factors in Mechanized Warfare. New York: Pergamon Press Inc., 1983.

Simpkin, Richard E. Red Armour. New York: Pergammon-Brassey's International Defense Publishers, 1984.

Soviet Military Encyclopedia, Vol 8. Moscow:1980.

Suvorov, Victor. Inside the Soviet Army. New York: Berkley Books, 1983.

Timmons, Richard F. "Lessons From the Past for NATO," The Parameters of War. Military History Journal of the U.S. Army War College., vol xiv no 3, Washington: Pergamon - Brassey's International defense Publishers, 1987.

Tindall, Major Richard G. and Lieutenant C. T. Lanham. Infantry In Battle, Washington, D.C: The Infantry Journal Incorporated, 1939.

Walker, Lieutenant Colonel William A., USA (RET), "The Deep Battle," ARMY Magazine, July 1986.

Walters, Robert J. Order out of Chaos. A Case Study of the Application of Auftragstaktik by the 11th Panzer Division during the Chir River Battles, 7-19 December 1942. Monterey, California: Naval Postgraduate School, March 1989.

War Department. Staff officers Field Manual. Washington: Government Printing Office, September 26, 1932.

Weigley, Russell F. History of the United States Army. New York: Macmillan Inc, 1967.

Weigley, Russell F. "The Parameters of War," Military History from the Journal of the U.S. Army War College. ed by Lloyd Matthews & Dale Brown. Washington: Pergamon-Brassey's International Defense Publishers, 1987.

Williamson, Porter B. Patton's Principles, (Tucson, Arizona: Management and Systems Consultants, Inc, 1979.

U. S. Army Infantry and Armor Schools, FC 71-6, Battalion and Brigade Command and Control. (Fort Benning, Georgia and Fort Knox, Kentucky: United states Army Infantry School and United states Army Armor School, 1 March 1985.

U. S. Department of the Army. FM 100-5 Operations, Washington, D.C: U.S. Government Printing Office, 5 May 1986.

U. S. Department of the Army. FM 101-5 Staff Organization and Operations. Washington, D.C: U.S. Government Printing Office, 25 May 1984.

U. S. Department of the Army. FM 101-5 Staff Organization and Operations. Washington, D.C: U.S. Government Printing Office, October 1985.

U. S. Department of the Army. Training Circular 101-5 Staff Organizations and Operations. Washington, D.C: Headquarters, Department of the Army, 30 October 1988.

U. S. Department of the Army. FC 101-55 Corps and Division Command and Control. Fort Leavenworth, Kansas: U.S. Command and General Staff College, 28 February 1985.

U.S. Department of the Navy. FMFM1, Warfighting. Washington, D.C: Headquarters United States Marine Corps, 6 March 1989.

U. S. Joint Chiefs of Staff. Joint Chiefs of Staff Publication 1-02, The Department of Defense Dictionary of Military and Associated Terms. Washington, D.C: U.S. Government Printing Office, 1987.

War Department. FM 101-5 The Staff and Combat Orders, Staff Officers Field Manual. Washington: Government Printing Office, 24 March 1942.

Initial Distribution List

1. Combined Arms Research Library
   U.S. Army Command and General Staff College
   Fort Leavenworth, Kansas 66027

2. Defense Technical Information Center
   Cameron Station
   Alexandria, Virginia 22314

3. Combat Studies Institute
   U.S. Army Command and General Staff College
   Fort Leavenworth, Kansas 66027

4. Deputy Commandant
   U.S. Army Command and General Staff College
   ATTN: ATZL-SWK
   Fort Leavenworth, Kansas 66027

5. Commanding General
   Combined Arms Training Activity (CATA)
   ATTN: ATZL-TAL
   Fort Leavenworth, Kansas 66027

6. Commander
   Operations Group
   ATTN: ATXY-XO
   Fort Irwin, California 92310

7. Commander
   177th Armored Brigade
   Fort Irwin, California 92310

8. Major General Ronald H. Griffith
   Commander
   1st Armored Division
   A.P.O. New York, 09330

9. Colonel Howard D. Hill
   Chief of Staff
   7th Army Training Command
   A.P.O. New York, 09114

10. Commander
    1st Cavalry Division
    Fort Hood, Texas 76545

11. Commandant
    U.S. Army Armor Center
    Fort Knox, Kentucky 40121

12. Commandant
    U.S. Army Infantry School
    Fort Benning, Georgia 31905